J. G. BRIGGS.

CULTIVATOR.

APPLICATION FILED JAN. 23, 1911.

1,014,944.

Patented Jan. 16, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

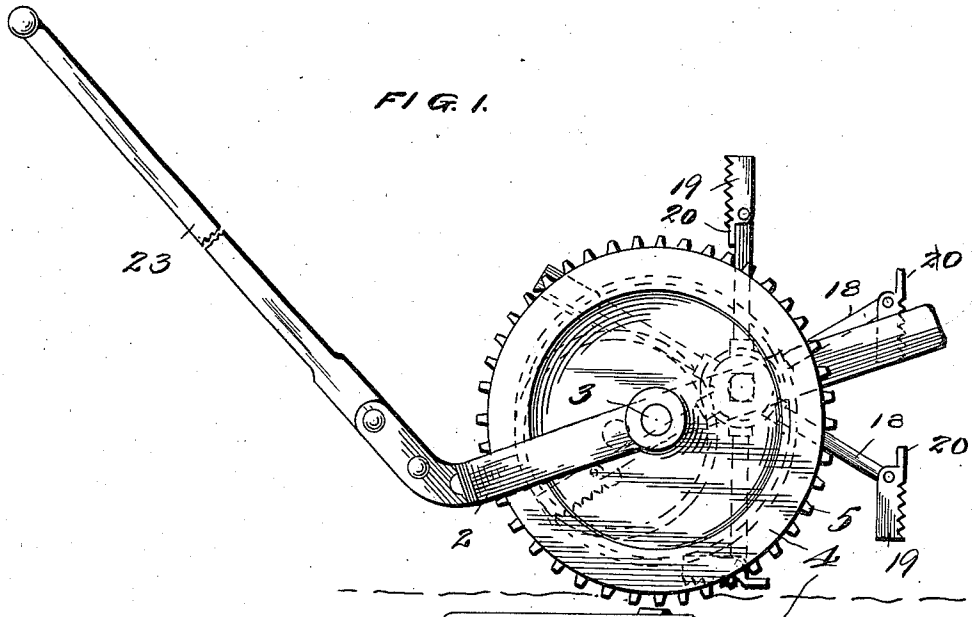
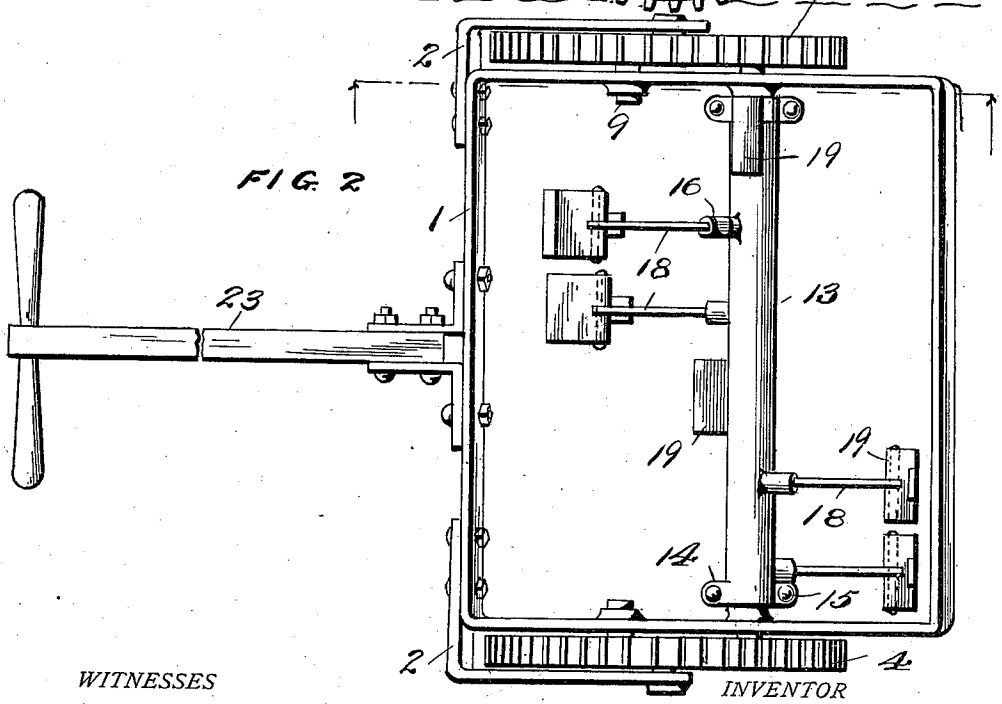


FIG. 2



WITNESSES

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2 SHEETS—SHEET 2.

FIG. 3.

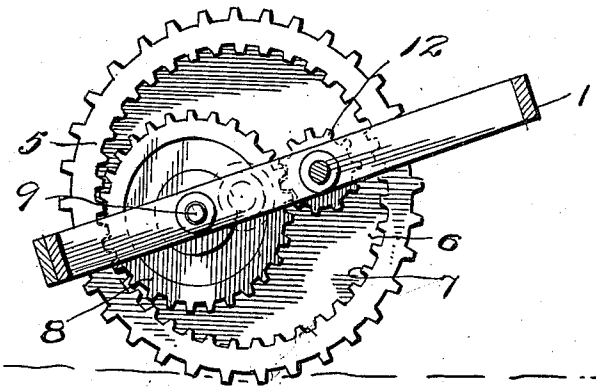


FIG. 4.

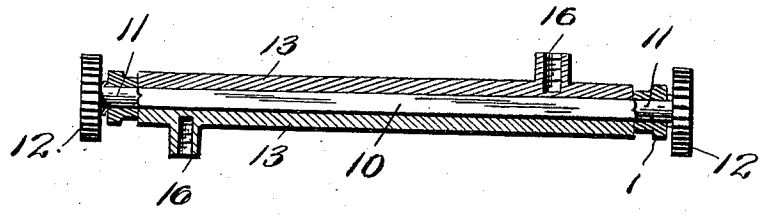
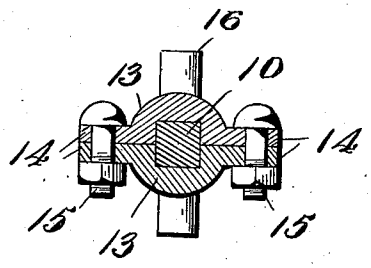


FIG. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH G. BRIGGS, OF SANTA MONICA, CALIFORNIA.

CULTIVATOR.

1,014,944. Specification of Letters Patent. Patented Jan. 16, 1912.

Application filed January 23, 1911. Serial No. 604,205.

To all whom it may concern:

Be it known that I, JOSEPH G. BRIGGS, a citizen of the United States, residing at Santa Monica, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

My invention relates to improvements in cultivators, and has particular reference to a machine for crushing clods.

The leading object of my invention is the provision of an improved machine which will serve to crush and pulverize clods adapted to be either manually propelled or drawn by suitable draft animals

A further object of the invention is the provision of an improved cultivator for crushing and pulverizing clods which will be simple in construction, highly efficient in operation and inexpensive of production.

To attain the desired objects, the invention further resides in the novel features of construction and combination and arrangement of parts for service substantially as described and as illustrated in the accompanying drawings.

Figure 1 represents a side elevation of the machine. Fig. 2 represents a top plan view thereof. Fig. 3 represents a sectional view of the machine on the line 3—3 of Fig. 2, looking in the direction of the arrows: Fig. 4 represents a longitudinal sectional view of the casting, showing the supporting shaft on which said casting is mounted. Fig. 5 represents an enlarged cross-sectional view of the shaft with the casting secured thereon.

In the drawings, in which similar characters of reference are employed to denote corresponding parts in the several views, the numeral 1 designates the frame of the machine, which is of rectangular form and has secured to the rear thereof and extending along its sides the L-shaped brackets 2 bearing the stud shafts 3 on which are mounted the supporting wheels 4 of the machine having the toothed or corrugated rim 5 for engaging the ground.

By reference to Fig. 3 it will be seen that the rim 5 incloses a central circular portion 6 and that the inner face of the rim is provided with the gear teeth 7, said teeth being in mesh with the intermediate gear 8 mounted on the stud shaft 9 projecting from the side of the frame. Extending across the frame is the square shaft 10 having turned ends 11 journaled in the sides of the frame, said ends of the shaft projecting from the sides of the frame and bearing the pinions 12 in mesh with the intermediate gear 8, the movement of the frame on its supporting wheels serving through the gears 7, gear 8 and pinion 12 to revolve the square shaft. Secured upon the square portion of said shaft and surrounding the same are a plurality of castings 13 having squared recesses therein in which the shaft fits, said castings having laterally extending ears 14 through which pass the securing bolts 15 for locking the castings in position on the shaft.

Formed on the castings and projecting radially therefrom are the lugs 16 having radially disposed threaded sockets 17 therein, while fitted in the sockets are the ends of the rods or arms 18. Pivotally secured to the outer end of each of said rods 18 is the toothed plate 19 having the reduced portion 20 adapted to contact with the rod to which said plate is secured to limit the movement of the plate, as best shown in Fig. 1, from which it will be seen that said plates on their downward movement are supported by the rods in alinement therewith, while as they strike the soil they are forced into position substantially parallel therewith, the arms dragging the plates over the ground and the teeth on the plates engaging and breaking up the clods. By reference to the drawings it will also be seen that on account of the great difference in size between the pinion and the interior gear of the supporting wheels a slight movement of the machine will prove sufficient to cause a complete revolution of the squared shaft and therefore cause a plurality of the tools carried by the casting to strike substantially the same portion of the soil, insuring the entire ground over which my machine passes being acted thereon thereby.

Secured to the rear of the frame is a handle 23 of ordinary construction for pushing the machine, while by reference to the drawings it will be seen that the depression of the handle serves to swing the shaft and arms secured thereon upward and out of engagement with the soil, allowing the machine to be freely moved from place to place or over rocky or other surfaces which would be liable to break the arms, while said upward swinging of the shaft is also convenient in starting the machine.

It will be understood that while I have

shown my machine provided with a handle for pushing the same that any means of propulsion may be employed, and it will be evident to all that I have provided a strong, simple, cheap and durable machine for the purposes set forth.

I claim:

In a clod crusher, a shaft, castings secured on the shaft, socketed lugs extending radially from the castings, rods having one end removably engaged in the sockets, plates pivotally secured to the outer ends of the rods and having serrated ground contacting faces, and reduced portions on the plates adapted to contact with the rods to limit the pivotal movement of the plates.

In testimony whereof I affix my signature, in presence of two witnesses.

JOSEPH G. BRIGGS.

Witnesses:

CHARLES S. WARREN,

JOHN W. MCDOWELL.