No. 719,159. PATENTED JAN. 27, 1903.

C. M. SULLINS.

ARCH BAR FOR CULTIVATORS.

APPLICATION FILED JULY 10, 1902.

NO MODEL.

Fig. 3.

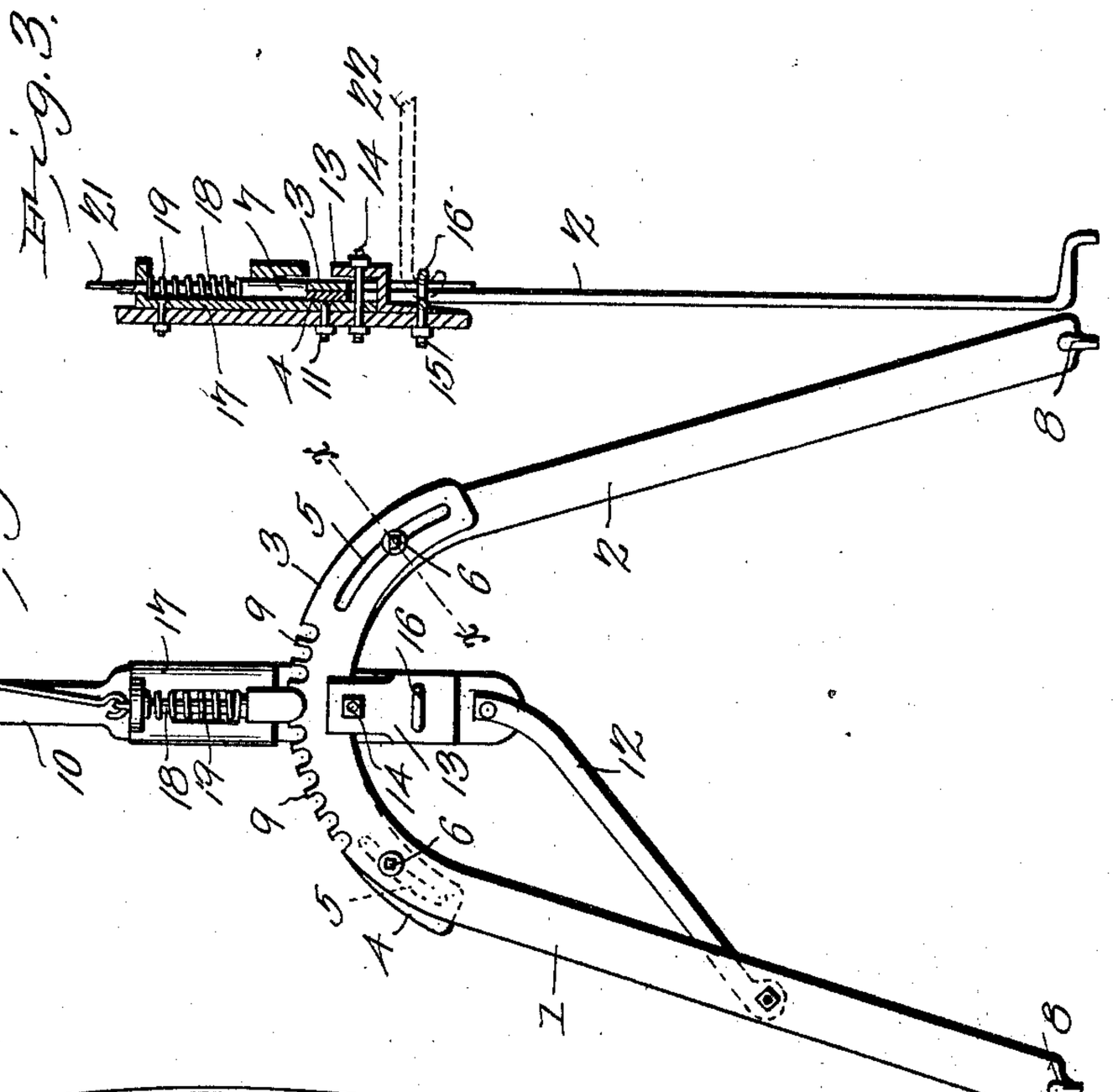


Fig. 2.

Fig. 1.

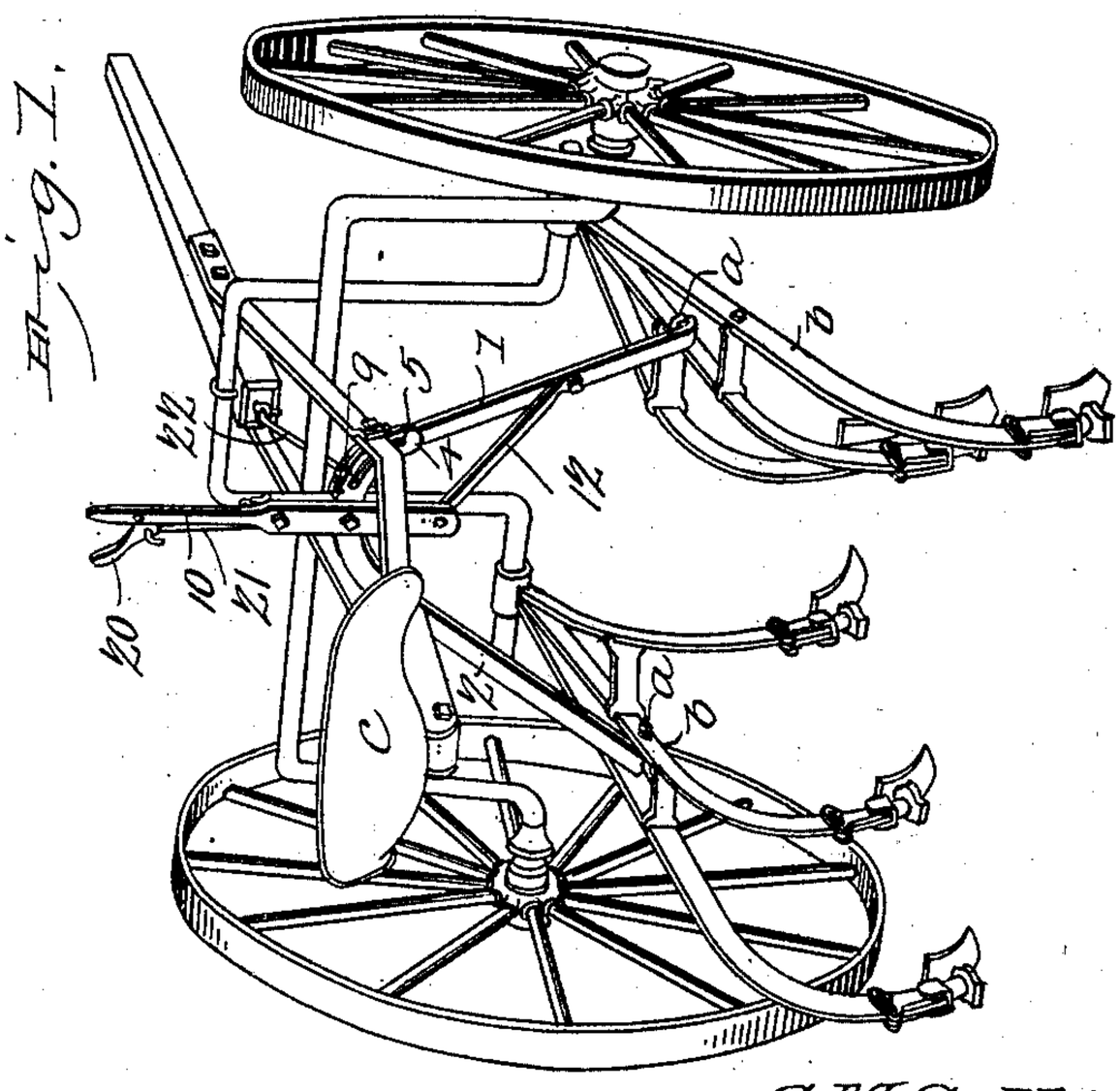
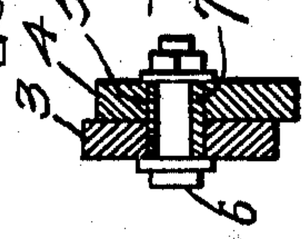


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CALE M. SULLINS, OF MOODY, TEXAS, ASSIGNOR OF ONE-THIRD TO DANIEL C. WILLIS, OF MOODY, TEXAS.

ARCH-BAR FOR CULTIVATORS.

SPECIFICATION forming part of Letters Patent No. 719,159, dated January 27, 1903.

Application filed July 10, 1902. Serial No. 115,084. (No model.)

To all whom it may concern:

Be it known that I, CALE M. SULLINS, a citizen of the United States, residing at Moody, in the county of McLennan and State of Texas, have invented a new and useful Arch-Bar for Cultivators, of which the following is a specification.

My invention relates to an improvement in double cultivators, and particularly with reference to the construction of the arch-bar which connects the respective cultivator-rigs together, the object of my invention being to provide an arch-bar which is adapted for use not only for connecting the cultivator-rigs together, but also for adjusting them laterally toward and from each other as required by the width of the spaces between the rows and for securing the cultivator-rigs at any desired adjustment.

A further object of my invention is to provide improved means for supporting the arch-bar in an upright position, which supporting means is detachable from the arch-bar, so that the latter may be readily applied to and detached from a double cultivator of any of the usual forms.

My invention consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a double cultivator provided with my improved arch-bar and adjusting-lever. Fig. 2 is a detail front elevation of my improved arch-bar, showing also the adjusting-lever with which the same is provided. Fig. 3 is a detail vertical central sectional view of the same. Fig. 4 is a detail sectional view of the same, on a somewhat larger scale, taken on a plane indicated by the line $x\ x$ of Fig. 2.

In the embodiment of my invention here shown the arch-bar comprises two members 1 2, which are provided, respectively, at their upper ends with curved or sector arms 3 4, that overlap each other. Each of the said curved arms is provided with a sector-shaped slot 5 of suitable length and width, and the respective curved arms of the members 1 2 are slidably connected together by bolts 6, which operate in the slots 5. On the shanks of the said bolts within the said slots are antifriction-rollers 7. It will be understood that by thus slidably connecting the curved arms of the respective members 1 2 together the latter may be so adjusted as to increase or diminish the distance between their lower ends, which are here shown as provided with hooks 8, adapted to engage suitable eyebolts or other similar devices a on the cultivator-rigs b of a double cultivator. Thereby the arch-bar may be so disposed as to connect the cultivator-rigs together, and by adjusting the respective members of the arch-bar the cultivator-rigs may be moved laterally toward or from each other, so that they may be disposed at any desired distance apart, according to the width of the space between the rows of plants.

Each of the sector-arms of the arch-bar is provided on its upper side with a rack 9. The teeth of the respective racks are adapted to register with each other. A hand-lever 10 is pivoted at a suitable distance from its lower end to the sector-arm of one of the arch-bar members, as at 11. As here shown, the pivot of the lever is in the sector-arm 4 and the lower end of the lever is connected to the member 1 by a link 12. Hence the lever is pivotally connected to one member of the arch-bar and connected by a link to the other member thereof; but within the scope of the appended claims this may be modified, and I do not desire to limit myself in this particular. On the front side of the lever near its lower end is a keeper 13, which bears against the front side of the sector-arm 3 of the member 1. This keeper is here shown as secured to the lever by a bolt 14 and also by an eyebolt 15, the eye 16 of which latter bolt is on the front side of the lever. The latter is also provided with a keeper 17, in which is a locking bolt or dog 18, adapted to engage the racks 9, and thereby lock the respective sections or members of the arch-bar together. A spring 19 is here shown to normally keep said locking bolt or dog in engagement with the racks of the sectors, and the hand-lever 10 is shown as provided with a thumb-lever 20, connected to the bolt or dog by a rod 21, whereby the bolt or dog may be readily disengaged from the racks of the sector-arms to permit adjustment of the members of the arch-bar by means of the lever 10.

It will be observed by reference to Fig. 1 of the drawings that the hand-lever 10 is disposed in front of the driver's seat *c*, where it is within convenient reach of the driver. It will be also understood that by first releasing the dog or bolt 18 from the racks 9 and then operating the hand-lever the members of the arch-bar may be so adjusted as to set the cultivator-rigs at the required distance apart and that this adjustment may be effected without the necessity of stopping the cultivator if it is in motion and without dismounting therefrom.

To support the arch-bar in the required upright position, I have provided a hook-link 22, which may be attached to the rear end of the tongue or to any other appropriate portion of the sulky-frame and also engaged with the eyebolt 15. This hook-link may be readily disengaged from the eyebolt when it is desired to detach the arch-bar from the cultivator.

I would have it understood that my improved arch-bar and operating-lever may be used in connection with a double cultivator or sulky-cultivator of any appropriate form, and I do not desire to limit myself in this particular.

Having thus described my invention, I claim—

1. An arch-bar for cultivators comprising a pair of members having curved portions forming sectors overlapping one another connected slidably and provided with teeth adapted to be brought into alinement, in combination with means for engaging said teeth of both sectors and thereby restrain the latter from movement with relation to each other.

2. An arch-bar for cultivators comprising a pair of members having sectors overlapping one another, said sectors being provided, each with a slot and with a bolt engaging the slot of the opposite sector, friction-rollers upon said bolts and means for effecting the adjustment of the members of the arch-bar with relation to each other and for retaining them at the desired point of adjustment.

3. An arch-bar for cultivators, comprising a pair of members having toothed sectors overlapping one another and slidably connected together, in combination with a lever having pivotal connection with one of said sectors, a link connecting said lever with the arch member having the other sector and means carried by said lever to engage the teeth of the sectors when brought into alinement with each other.

4. An arch-bar for cultivators, comprising a pair of members connected together for angular adjustment, in combination with a lever secured to one of said members and a connection between the lever and the other member, substantially as described.

5. An arch-bar for cultivators, comprising a pair of members connected together for angular adjustment, in combination with a lever secured to one of said members and a link connecting the lever with the other member, substantially as described.

6. In a sulky-cultivator, the combination of an arch-bar having a pair of members connected to the respective cultivator-rigs and connected together for angular adjustment, a lever carried by the arch-bar, to adjust the members thereof and thereby laterally adjust the cultivator-rigs, and a link, connected to a part of the cultivator and to the said lever to support the arch-bar in position, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

C. M. SULLINS.

Witnesses:
JAMES R. BARLOW,
J. D. WADE.