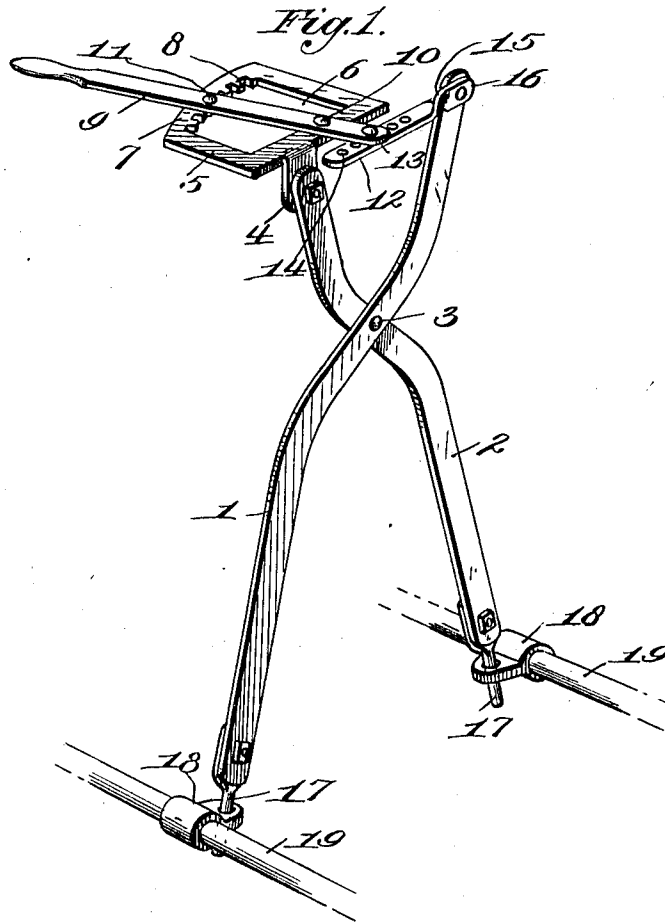


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CULTIVATOR HOPPLE.
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CULTIVATOR-HOPPLE.

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To all whom it may concern:

Be it known that I, FLETCHER SMITH, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented a new and useful Improvement in Cultivator-Hopples, of which the following is a specification.

This invention relates to cultivator hoppers, and the primary object of the same is to provide a device of this class which may be easily applied to the beams of cultivator gangs and readily operative to shift the said beams in opposite lateral directions to positively adjust the gangs of cultivating devices as may be desired and found necessary, the several parts of the hopple being associated in a strong and structurally effective manner and adjustable to regulate the throw or movement of the main adjusting elements or bars.

The invention consists in the construction and arrangement of the several parts which will be hereinafter described and claimed in preferred form.

In the drawings: Figure 1 is a perspective view of a hopple embodying the features of the invention and shown applied to portions of the beams of cultivator gangs. Fig. 2 is a longitudinal vertical section through the upper part of the hopple, the main adjusting elements or bars being omitted.

The numerals 1 and 2 designate the main adjusting elements or bars, consisting of suitable flat strips of metal bent into the shape as shown by Fig. 1, and crossed and pivoted to each other as at 3, the greater portion of the adjusting elements or bars being located below the pivot means therefore so as to provide for a greater range of movement of the lower portion of the said bars. The upper end of the element or bar 2 is securely fixed or bolted to a depending ear or projection 4 of a horizontally disposed supporting segment 5 which is in the form of a skeleton plate or has an opening 6 therethrough and a curvilinear extremity 7 provided at its inner edge with a plurality of teeth 8. On this supporting segment 5 an operating lever 9 is disposed and pivotally attached as at 10 to the extremity opposite the curvilinear extremity 7, the lever 9 being pivoted at a distance from one end so that the latter will project over and beyond the extremity of the supporting segment to which it is attached. The lever 9 is also provided with a suitable

catch means which may be of any preferred form, but as shown for the purposes of illustration consists of a pin 11, see Fig. 2, to engage the teeth 8, the lever 9 being sufficiently loose in its application to permit it to be elevated or slightly raised to clear the pin 11 from the teeth in adjusting the hopple or to permit the said lever to be shifted over the supporting segment 5. The loose movement of the lever 9 as just explained is permitted by giving a certain amount of play to the pivot or pivot connection therefor as at 10 without detracting from the effectiveness of the lever in its operation as a means to maintain the adjustment through the engagement of the pin 11 with the teeth 8. The end of the lever 9 projecting beyond the extremity of the supporting segment 5 to which it is pivoted is adjustably attached to a link 12 through the medium of a bolt or pin 13 adapted to engage either one of a series of openings 14 in the link. This link consists of a bar or strip of metal which has one end bent or given a quarter-turn at 15 to form an attaching extremity 16 which is movably secured to the upper end of the adjusting element or bar 1, and by bending the link 12 as just specified one side thereof is disposed in desired position for adjustable connection thereto of one end of the lever 9 through the medium of the pin or bolt 13. By changing the point of attachment of the end of the lever 9 to the link 12, the lateral shifting or adjusting movement of the main adjusting elements or bars 1 and 2 may be modified at will to accommodate various applications and also to regulate the lateral adjustment of the beams of the cultivator gangs.

On the lower ends of the main adjusting elements or bars 1 and 2, supporting pins 17 are secured and are fitted or dropped in sockets 18 held on the beams 19 of the cultivator gangs. The sockets 18 may be of any preferred form and the pins 17 and sockets 18 will be of such relative proportions as to provide an effective application of the hopple to the beams 19. The hopple through the medium of the pins 17 and sockets 18 may be readily applied to or detached from the beams 19 of the cultivator gangs, and in the application of the sockets 18 to the beams 19 any suitable means may be employed.

From the foregoing the operation of the improved hopple will be obvious and it will

be understood that by changing the position of the lever 9 on the supporting segment 5 or moving said lever in opposite lateral directions the main adjusting elements or bars 1 and 2 will be correspondingly moved and the beams 19 forced apart or drawn together as may be desired. The association of the hopple with the beams 19 will be of such positive character that the hopple will not become detached or dissociated during the travel of the cultivators or when the latter may strike obstructions that would set up a sudden jar of the beams 19.

It will be seen that the hopple is composed of a comparatively small number of parts that may be readily constructed and assembled at a minimum cost, and the hopple as a whole is adapted to be used with cultivators embodying cultivator gangs having beams projecting therefrom.

It will be understood that changes in the proportions, dimensions and minor details of construction within the scope of the claims may be adopted at will.

What is claimed as new is:

1. In a hopple for cultivators, the combination with the beams of cultivator gangs, of sockets secured on the beams, main adjusting bars intermediately pivoted and crossed and having their upper ends separated, pins being secured to the lower ends of the adjacent bars and freely movable in the sockets, a horizontally disposed segment attached at one side of its longitudinal center to the upper end of one of the main adjusting bars and consisting of an open frame having teeth formed in the inner

edge of the side opposite that secured to the bar, a link movably attached at its outer end to the upper end of the remaining adjusting bar and projecting inwardly and free of contact with any part of the bar carrying the segment to permit unrestricted movement of said latter bar in its adjustment and from the remaining bar, the link being on a level with the inner attached side of the segment, and a shifting lever applied in flat position on and intermediately fulcrumed to the attached side of and movable over the segment and extending over and having one end adjustably connected to the said link, the lever having means engaging the teeth of the segment.

2. In a hopple for cultivators, the combination with the beams of cultivator gangs, of a pair of main adjusting bars connected by an intermediate pivot and having their lower ends operatively associated with the said beams, the upper ends of the bars being diverged and unconnected, a segment fixed to the upper end of one bar and disposed at an angle thereto, a horizontally disposed link movably attached to the upper end of the remaining bar and extending inwardly toward the free end of the bar to which the segment is attached, and a lever intermediately fulcrumed on and extending fully over the segment and having one end adjustably connected to the link, the lever and segment being provided with cooperating means for holding the lever in adjusted position.

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Witnesses:

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