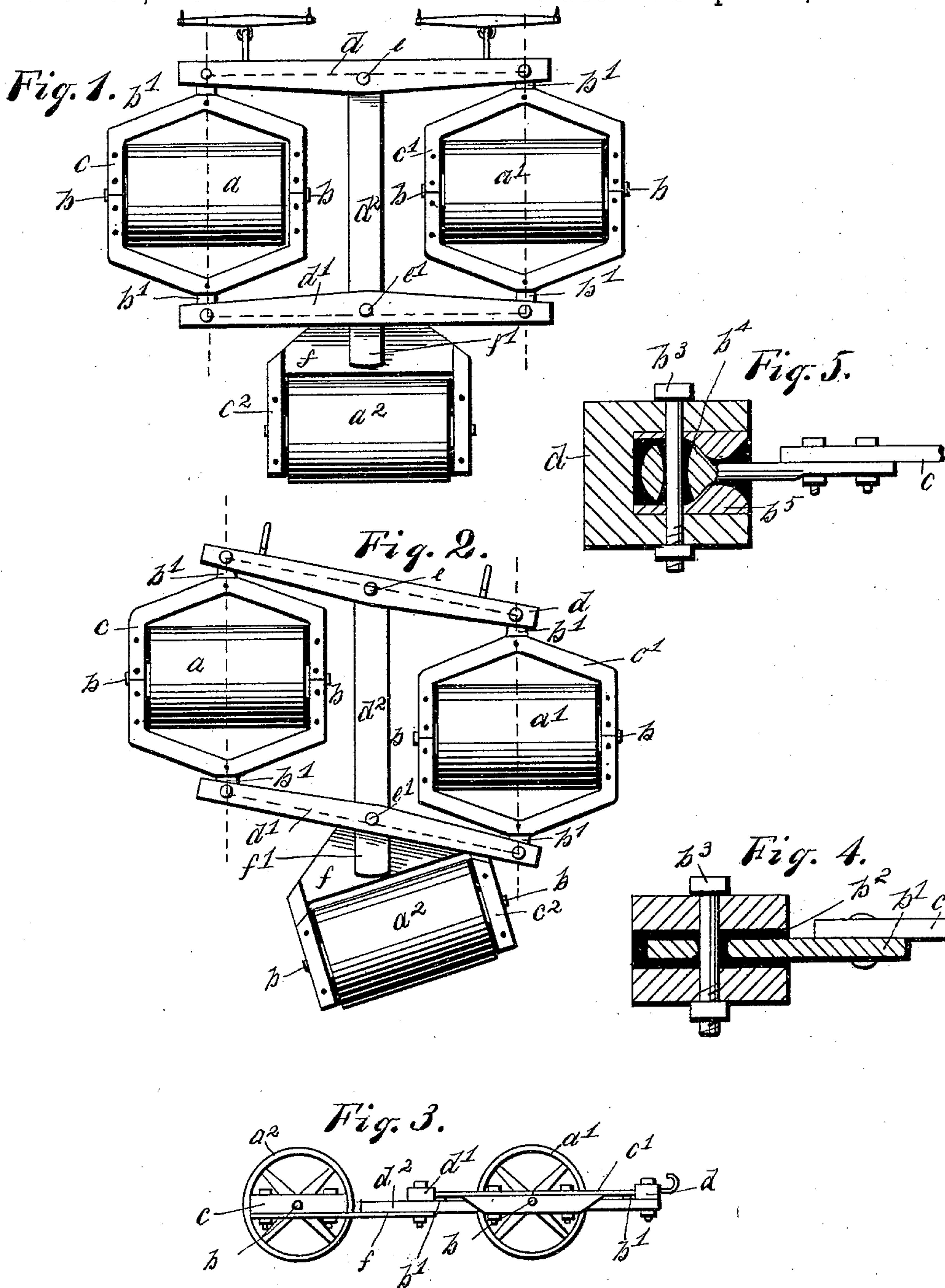


(No Model.)

H. S. CREDLEBAUGH.
FARM ROLLER.

No. 496,349.

Patented Apr. 25, 1893.



WITNESSES:

H. O. Carter.
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INVENTOR

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BY

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UNITED STATES PATENT OFFICE.

HENRY S. CREDLEBAUGH, OF NEW CARLISLE, OHIO, ASSIGNOR OF ONE-HALF
TO JOHN V. PERRINE, OF SAME PLACE.

FARM-ROLLER.

SPECIFICATION forming part of Letters Patent No. 496,349, dated April 25, 1893.

Application filed July 13, 1892. Serial No. 439,862. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. CREDLEBAUGH, a citizen of the United States, residing at New Carlisle, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Farm-Rollers, of which the following is a specification.

My invention relates to farm rollers and the object of my invention is to provide a roller of simple construction which shall be capable of adapting itself to the uneven surfaces of the ground and which is constructed in the nature of a sectional roller, the sections being flexibly connected to the frame so as to readily adjust themselves in changing direction, and in operating under different circumstances. I attain these objects by the constructions shown in the accompanying drawings, in which—

Figure 1 is a plan view of a roller embodying my invention. Fig. 2 is a similar view showing the parts in a different position of adjustment. Fig. 3 is an end elevation of the same, some of the parts being broken away to better illustrate the constructions. Fig. 4 is a detail view of one of the jointed connections. Fig. 5 is a similar view showing a modification.

Like parts are represented by similar letters of reference in the several views.

In the said drawings a , a' and a^2 represent the rollers proper, three of which are employed. These rollers may be of any desired construction, either of metal or wood, and hollow or solid, as desired. Each of the rollers is provided at each end with trunnions b , adapted to turn in suitable bearings in supporting frames c , c' and c^2 . The rollers a , a' and a^2 and their frames are arranged in their normal position in the form of a triangle with the rear roller immediately behind the space between the front rollers a a' . The supporting frames c and c' , of the front rollers a a' , are pivotally connected at the front and rear to transverse connecting bars d d' , which in turn are pivoted at e e' , to a central longitudinal connecting bar d^2 , the supporting frame c^2 , of the rear roller a^2 , being pivoted to the frame thus formed by the same pivotal connection e' , which joins the rear cross bar d' ,

and the central longitudinal bar d^2 . The rear supporting frame c^2 , is preferably formed in front with a broad connecting bar f , which forms a bearing seat for the projecting end f' , of the central longitudinal bar d^2 , which assists in preventing undue vertical movement of the rear roller and its supporting frame.

The supporting frames c c' , are preferably formed with connecting projections b' , which extend into slotted openings b^2 , in the cross bars or connecting beams d d' , and are pivotally connected therein by bolts b^3 , the perforations through which said bolts pass and the slotted openings in the respective beams being of sufficient size to permit a limited movement therein, in the nature of a universal joint, to allow the rollers and their supporting frames to adjust themselves independently to the uneven surfaces over which they may pass.

If desired a ball and socket joint may be employed, such as shown in Fig. 5, in which a ball-shaped bearing b^4 , is inserted in a concave socket piece b^5 , which socket piece is inserted into a slotted opening in the beam b , the connecting bolt b^3 , being adapted to pass through all the parts and secure them together, as shown. Any other form of joint which will produce the limited universal movement may be employed.

By pivotally connecting the supporting frames c c' , at the front and rear to the transverse bars d d' , the said pivotally connecting bars are connected together in the nature of a parallelogram, and maintain their parallel relations under all adjustments of the respective frames, as indicated by dotted lines in Figs. 1 and 2. By the use of this construction the employment of a tongue may be entirely dispensed with and the horses or other motive power hitched directly to the single-trees or other connections attached to the front cross bar d . All tongue lash or neck weight upon the horses is prevented and the frame itself becomes an equalizer to equalize the load upon the respective horses. In changing direction the respective front frames and their rollers assume the position indicated in Fig. 2, at an angle, while the rear roller swings in the opposite direction from the front cross

bar, to which the horses are attached, and thus travels in the arc of a circle immediately behind the space left by the two front rollers, so as to always cover the ground left by the front rollers.

In constructing the roller the frames c c' and c^2 , are preferably made of metal to which may be bolted or otherwise secured either wooden or metal bearings, as the case may be, for the trunnions, and to the respective rollers. The connecting bars d d' , d^2 , are preferably made of wood and the pivotal connections are all preferably formed by common bolts, thus enabling the roller to be simply and cheaply constructed, all the parts being such that if they become worn or broken they can easily be repaired without the aid of a skilled mechanic.

By the construction as above described it will be seen that a simple and effective roller is secured having a flexible connecting frame with the roller sections secured flexibly therein, so as to readily adapt themselves to the various inequalities of the ground as well as to the positions necessary in changing direction or otherwise.

The arrangement of the three sections, in which the two flexible frame sections are arranged in front of the third section, which is pivoted to the flexible frame connecting the front sections, and adapted to follow, so as to travel over the space left by the front sections, enables the rear section to follow in the proper direction, whenever the direction of the front sections is changed. By placing the support or seat for the operator upon the longitudinal connecting bar d^2 , the weight is evenly distributed on all three of the sections and all weight removed from the tongue or other draft connections.

As before stated the tongue may be entirely dispensed with, and I preferably attach the draft connections directly to the front bar d' , though, if desired, a tongue may be employed, in which case it would be properly connected to the central longitudinal connecting bar d^2 .

Having thus described my invention, I claim—

1. A farm roller consisting essentially of three sectional rollers, each pivoted in a supporting frame, the front supporting frames being pivoted at the front and rear to paral-

lel connecting bars which are also pivoted to a central connecting bar to which the rear supporting frame is connected, substantially as specified.

2. In a roller, a flexible frame formed essentially of front and rear parallel bars connected together at their extremities by encircling frames and at the center by a central longitudinal connecting bar, said frames and bars being all pivotally connected to form a flexible parallelogram, and roller sections journaled in suitable bearings in said encircling frames, substantially as specified.

3. The combination with the flexible frame formed by parallel front and rear connecting bars and auxiliary connecting frames, said auxiliary frames being formed with front and rear projections pivotally connected to said parallel bars, and supporting bearings in said auxiliary frames, and a roller or roller section journaled in each of said frames, substantially as specified.

4. The combination with the flexible frame formed of front and rear connecting bars, and auxiliary connecting frames having front and rear projections pivotally connected to the respective connecting bars, a central longitudinal connecting bar also pivoted to said connecting bars and provided with a rear extension, and a roller section mounted in a suitable frame and pivoted to said flexible frame at the rear and having a bearing plate adapted to act in connection with said extended portion, substantially as specified.

5. The combination with the front and rear parallel connecting bars having slotted openings, as described, the auxiliary encircling frames having the roller sections therein and provided with front and rear projections extending into said slotted openings, a pivot connection between said bars and projections, and a central longitudinal connecting piece also pivoted to said bars and provided with a rear extension to which is connected a roller section mounted in a suitable supporting frame, substantially as specified.

In testimony whereof I have hereunto set my hand this 5th day of July, A. D. 1892.

HENRY S. CREDLEBAUGH.

Witnesses:

S. M. YOUNG,

WALTER LEMMON.