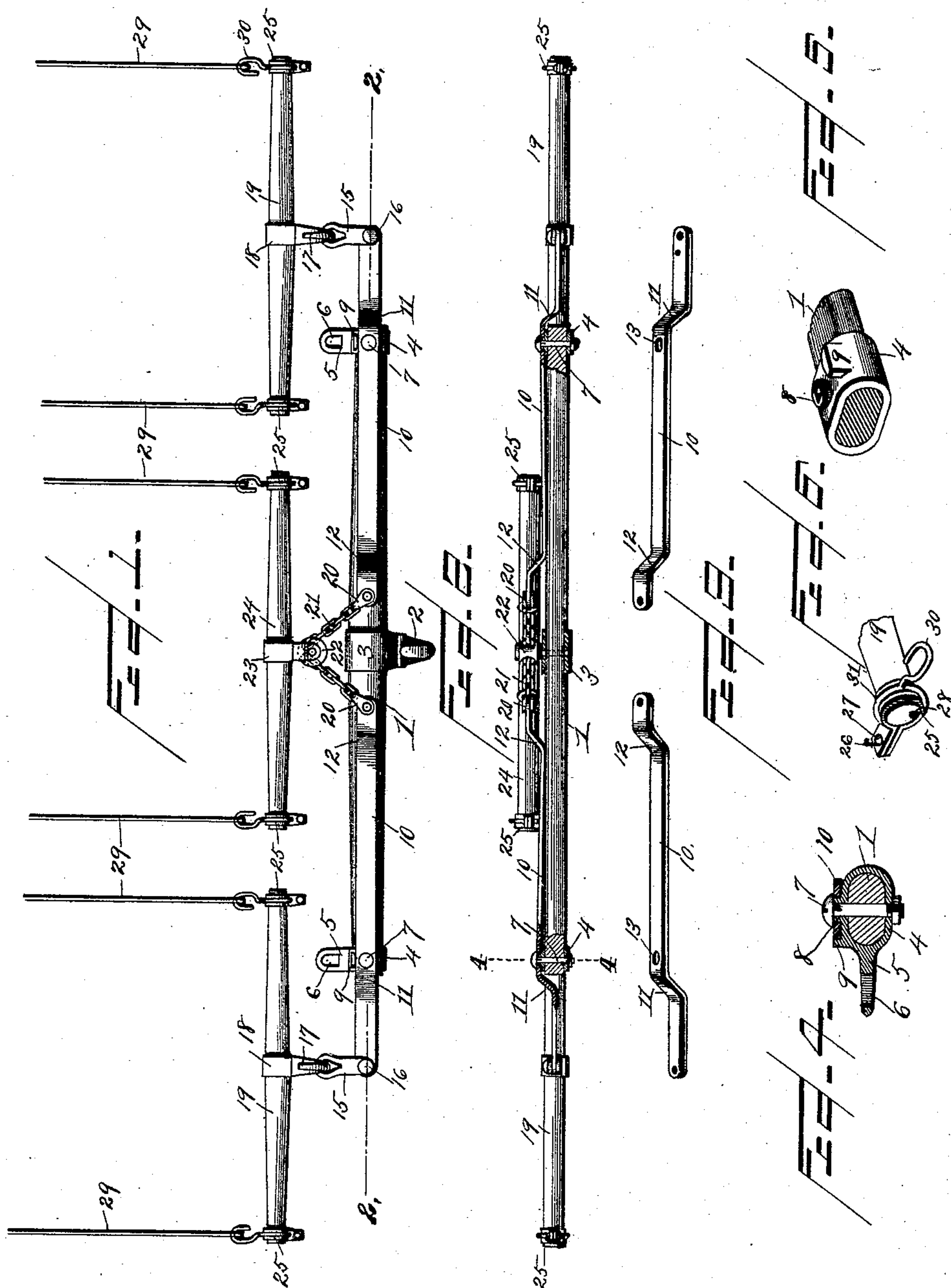


(No Model.)

J. G. STOWE.
DRAFT EQUALIZER.

No. 455,861.

Patented July 14, 1891.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES G. STOWE, OF KANSAS CITY, MISSOURI, ASSIGNOR TO THE SOUTHWESTERN SUPPLY COMPANY, OF SAME PLACE.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 455,861, dated July 14, 1891.

Application filed March 17, 1891. Serial No. 385,407. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. STOWE, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to appliances for equalizing the work of three draft-animals, such devices being known as "three-horse eveners" or "tripletrees;" and the objects of my invention are to produce a draft-equalizer which shall be simple, strong, and durable in construction, which thoroughly equalizes the work of the three draft-animals, and which can quickly and easily be transformed into a doubletree without necessitating any material alterations in the construction of the parts.

To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it, with reference to the accompanying drawings, in which—

Figure 1 is a plan view of my improved draft-equalizer arranged for use with three draft-animals. Fig. 2 is a rear elevation of the same, parts being also shown in longitudinal vertical section on the line 2 2 of Fig. 1. Fig. 3 is a detached perspective view of the two equalizing-levers. Fig. 4 is a transverse vertical section of one end of the doubletree on the line 4 4 of Fig. 3, showing the construction of the clip. Fig. 5 is a detached perspective view of one end of the doubletree and its clip. Fig. 6 is a detached perspective view of one end of one of the singletrees, showing its adjustable clip.

In the said drawings, 1 designates the doubletree, which is provided midway of its length with a hook 2, the shank 3 of which is of tubular form to embrace said doubletree, the hook 2 serving as the means for connecting the equalizer to the vehicle, agricultural implement, or other structure to be operated upon. Each end of this doubletree is embraced by a tubular or sleeve-like clip 4, the

front portion of which is formed or provided with an extension 5, having an opening or eye 6, for a purpose to be hereinafter explained. Each of these clips 4 is retained in position upon the end of the doubletree 1 by a bolt or pin 7, which passes vertically through the end of the doubletree and also through the upper and lower parts of the clip. At the point where the bolts or pins 7 pass through the upper parts of the clips 4 each of said clips is formed with a hollow lug or boss 8, which thus surrounds the upper end of the pin or bolt 7 just beneath the head of the same, and which also serves a further purpose to be presently described. Each of the clips 4 is also formed on its upper side with a projection or lug 9, which lies just in front of the hollow boss 8, and the purpose of which will be presently explained.

10 designates the two equalizing bars or levers, each of which is formed of a single piece, preferably wrought-iron, and the outer portion of which is bent downward, as shown at 11, while the inner end of each of said levers is bent upward, as shown at 12. An eye or hole 13 is formed in the outer end of the straight body portion of each lever 10, adjacent to the point of union of said portion with the bend 11, and the diameter of these holes is such as to enable them to receive the hollow bosses or lugs 8 of the clips 4, above described. The pins or bolts 7 serve also as the means for retaining the levers 10 in the described connection with the hollow lugs or bosses 8, and it will be seen that this arrangement insures a very strong and durable pivotal connection of each lever 10 with the corresponding clip 4 of the doubletree 1, while at the same time permitting the levers 10 to be readily detached from the doubletree when the latter is to be used without the equalizing-levers. When in the described operative position, the levers 10 lie immediately behind the lugs 9 of the clips 4, the front edges of the said levers being in contact with the said lugs 9, and thus the connection of the levers to the clips 4 is further strengthened. The downward outer bends 11 and the upward inner bends 12 of the levers 10 serve to bring the lines of draft of the outer and

inner singletrees in proper relation to the structure being operated upon. To the outer end of each lever 10 is attached, preferably by a pivot 16, a link 15, in the outer end of which is formed an eye or opening, as shown. Into the eyes or openings of the links 15 are removably inserted the hooks 17, the tubular or sleeve-like shanks 18 of which embrace the outer singletrees 19 each midway of the length thereof.

The inner end of each equalizing-lever 10 carries a link 20, preferably pivotally connected to said lever, and these two links are connected by a short chain 21. This chain also passes over the front of a pulley or roller 22, which is journaled between the rearwardly-extending arms of a clip 23, which embraces the central singletree 24 midway of the length of the same. It will be seen that by the use of the chain 21 great freedom of movement is permitted to the middle singletree 24, so that when the draft-animals are being turned or guided out of a straight line of travel no severe twisting strains will be brought upon the equalizing devices.

To each end of each of the singletrees 19 and 24 is connected an adjustable clip 25, which is tubular or sleeve-like in form to embrace the end of the singletree, and which is formed with two rearwardly-extending arms or projections 26, through which passes a bolt 27, said bolt serving to draw the arms closely together, and thus bind the clip securely upon the end of the singletree. The inner surface of the upper and lower parts of the clip 25 is formed with the two oppositely-disposed inwardly-extending teeth or pointed projections 28, which, when the clip is tightened upon the singletree, as above described, bite into the singletree, and thus further insure a strong connection of the clip with said singletree. The tugs or traces 29 are connected at their rear ends to the hooks 30, the shanks 31 of which are of circular form and embrace the clips 25, said shanks also passing through the arms 26. It will be seen from this description that the clips 25 are so constructed as to be readily applied to and removed from the singletree, and that by loosening the nuts or bolts 27 the clips can be opened and set farther inward or outward upon the singletrees, as desired.

When it is desired to use the doubletree 1 with two instead of three animals, the bolts 7 are removed, so as to permit the equalizing-levers 10 to be detached from the doubletree, and said levers and the singletree 24, with its connections, are separated from the doubletree. The singletrees 19 are now detached from the outer ends of the equalizing-levers 10, and the hooks 17 of said singletrees are inserted into the eyes or openings 6 of the projections 5 of clips 4. Thus the device can be easily and quickly transformed from a three-horse evener or tripletree to an ordinary doubletree without necessitating any material change of the structural parts. When used as a draft-equalizer, the power exerted by the middle draft-animal is, owing to the pivotal position of the levers 10, exactly equal to that exerted by each of the outside animals, and consequently each of said animals is required to perform only his proportional amount of the labor.

The device as a whole is simple, strong, and very durable in construction, and for this reason can be produced at comparatively little expense.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. An improved draft-equalizer, comprising a doubletree provided at each end with a tubular or sleeve-like clip formed on its upper side with a hollow boss or projection, also with a lug located in front of said boss, an equalizing-lever pivoted upon said boss, and a pin or bolt passing through said boss and lever and also through said clip, substantially as set forth.

2. An improved draft-equalizer, comprising a singletree having on each end a tubular or sleeve-like clip provided with parallel arms or extensions and on its inner face with inwardly-extending projections, and a bolt passing through said arms, substantially as set forth.

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

JAMES G. STOWE.

Witnesses:

JNO. L. CONDRON,
H. E. PRICE.