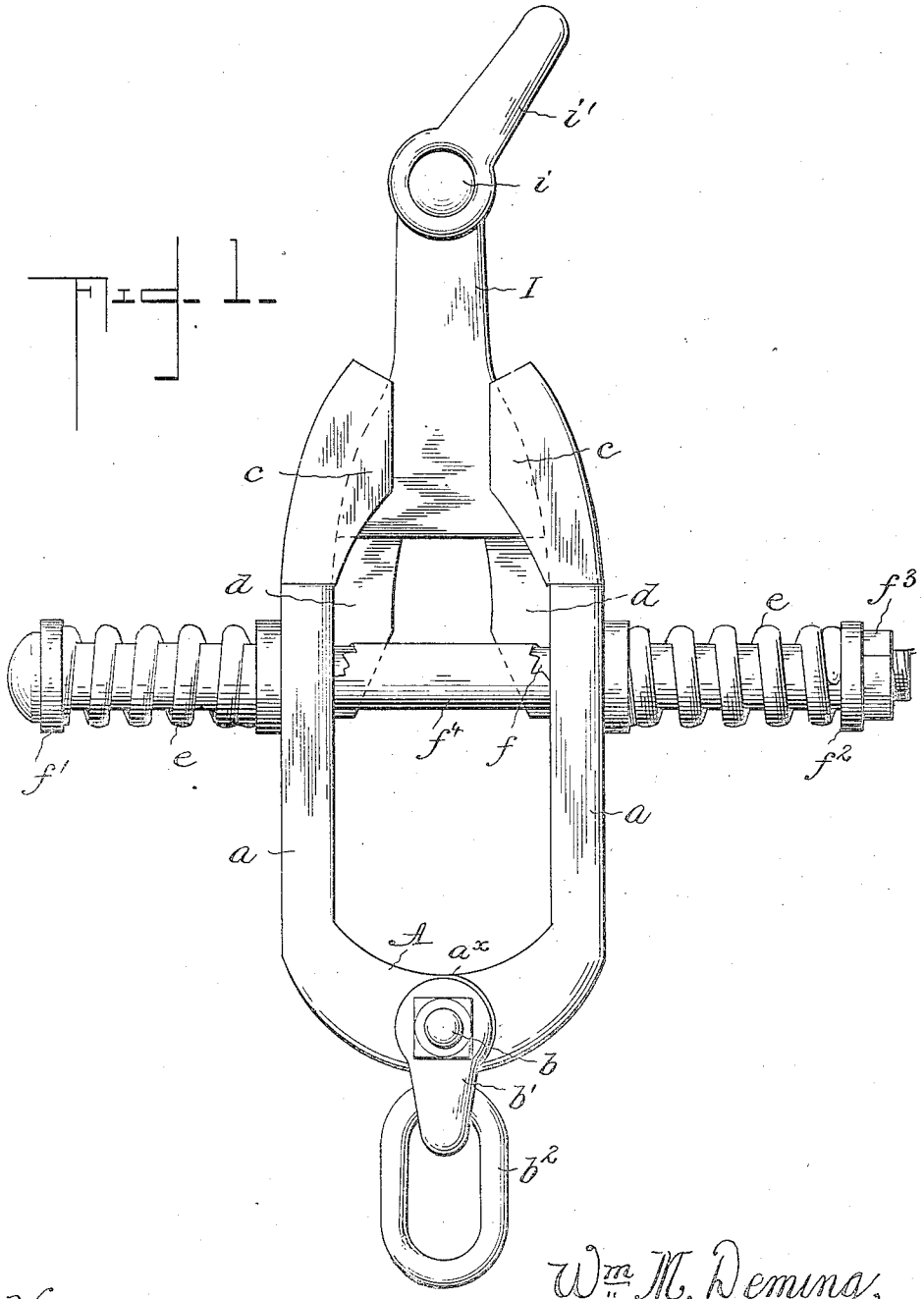
No. 835,666. PATENTED NOV. 13, 1906.

W. M. DEMING.

SLIP CLEVIS.

APPLICATION FILED MAY 8, 1905.

2 SHEETS—SHEET 1.



Witnesses:—
H. L. Beall.
S. E. Thomas.

by

Wm. M. Deming,
Inventor,
Attorney.

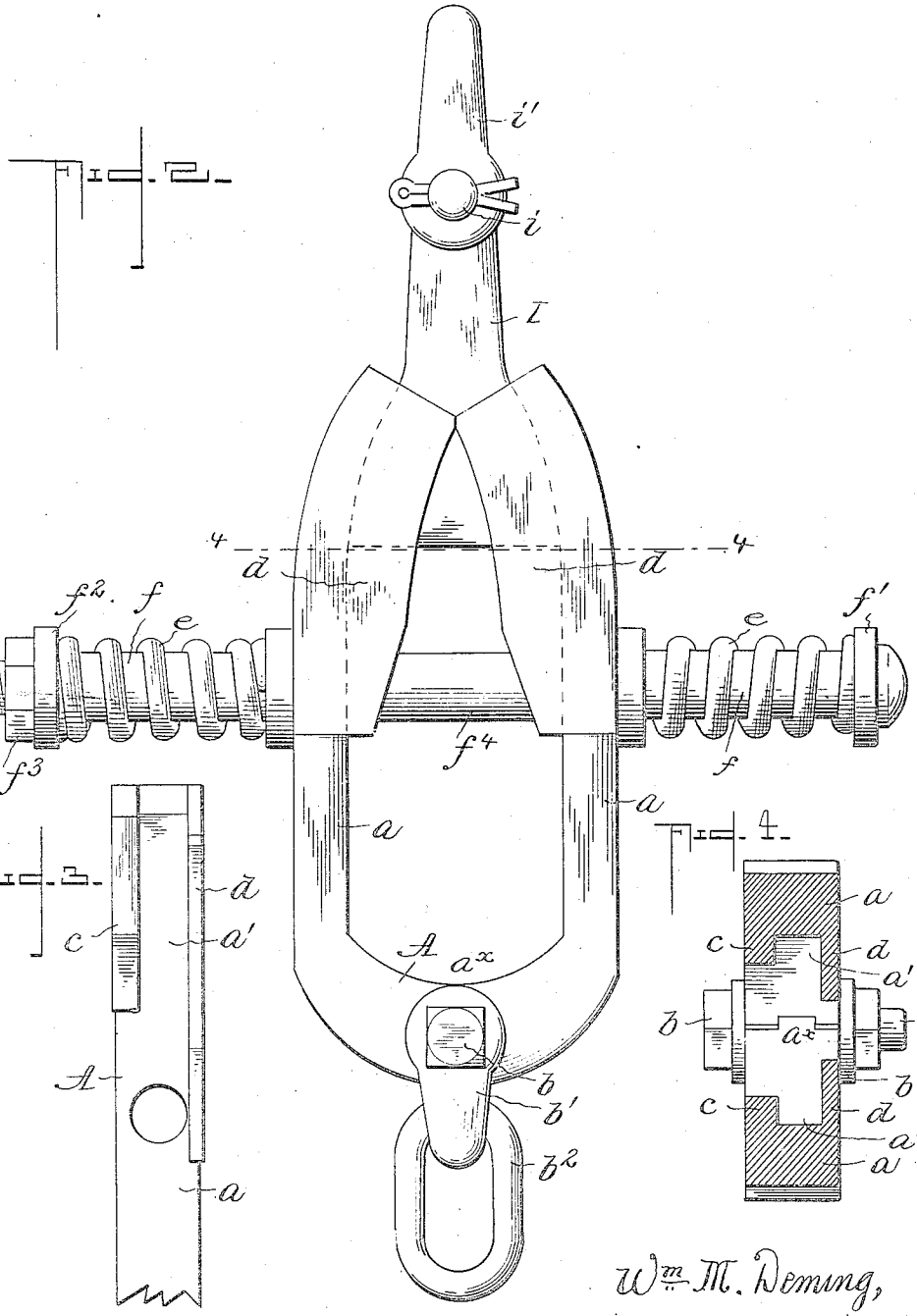
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UNITED STATES PATENT OFFICE.

WILLIAM M. DEMING, OF CARTHAGE, SOUTH DAKOTA.

SLIP-CLEVIS.

No. 835,666. Specification of Letters Patent. Patented Nov. 13, 1906.

Application filed May 8, 1905. Serial No. 259,487.

To all whom it may concern:

Be it known that I, WILLIAM M. DEMING, a citizen of the United States, residing at Carthage, in the county of Miner and State of South Dakota, have invented a Slip-Clevis, of which the following is a specification.

This invention is an improved clevis or draft attachment for vehicles, and has particular reference to the provision of a device of this character for application to a plow or other agricultural implement which is drawn by a motor-vehicle, such as a traction-engine.

The principal object of the invention is to provide a form of clevis which will part or separate when undue strain is brought upon the connection between the plow or implement and its motor vehicle or engine—as, for instance, when the plow or implement strikes an obstruction which would be liable to injure the former should the engine continue to pull upon the same—the connection of the parts of the clevis being such that they will hold under ordinary conditions to permit the plow or implement to be drawn for its usual work and over ordinary obstructions.

Other objects of the invention are to provide a construction of clevis for this purpose which will not suffer any injury by the separation of its parts in use, will form a secure connection under ordinary conditions, and will provide for quickly and conveniently recoupling the parts of the clevis.

With the foregoing principal objects in view my invention consists of a separable clevis comprising two parts connected, respectively, to the machine to be drawn and the engine or means for drawing it and adapted to part or separate under a certain amount of strain exerted on the connection.

My invention further consists in the peculiar construction and arrangement of the parts constituting the clevis as a whole, all as hereinafter fully described in the specification and specifically set forth in the appended claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view looking at one side of a clevis constructed in accordance with my invention. Fig. 2 is a similar view looking at the other side of said clevis. Fig. 3 is a detail view looking at the inner edge of one of the members of the clevis. Fig. 4 is a sectional view on the line 4 4 of Fig. 2 with the bolt removed to show the hinge connection of the separable members.

Like letters of reference indicate like parts in all the views of the drawings.

In carrying out my invention I employ in the first instance a practically U-shaped device A, comprising the members *a a*, which are pivotally connected or hinged at their lower ends, as at $a^{\times}$, by means of the bolt *b*, so that said members may have a movement to and from each other for the purpose hereinafter set forth. At the hinge connection of the members *a a* there is attached, by means of the bolt *b*, a loop *b'*, which in conjunction with the link b^2 forms the means of connecting said U-shaped device to a draft connection, such as a chain, attached either to the machine to be drawn or to the engine for drawing the same. At their free ends the companion members *a a* of the U-shaped device A are curved inward toward each other, as shown, and at one edge, preferably the inner edge, said members are provided with flanges *c* at one side and with corresponding flanges *d* at the other side, the latter being longer and wider than the former for the purpose hereinafter explained. These flanges *c* and *d*, in connection with the curved portions of the members *a*, provide converging recesses or ways, as *a'*, which in the present instance receive and confine a plate I in connection with the U-shaped device.

The lower part of the plate I is shaped at its side edges to conform to the shape of the recesses or ways *a'*, formed by the flanges *c* and *d*—that is to say, are curved outwardly—while the upper part of said plate is substantially straight and at its outer end has attached thereto by pin *i* a loop *i'*, by means of which latter the plate is connected to a draft connection—for instance, a chain—as in the case of the U-shaped device. The width of the straight portion of the plate I is approximately the same as the distance between the edges of the flanges *c c*, so that said plate may be passed between said flanges into the converging recesses or ways of the U-shaped device, and it will be noted that the lower part of said flanges *c c* are cut away, so that the wider part of the plate may pass between them.

The separable members *a a* of the U-shaped device or part A of the clevis are connected by a rod or bolt *f*, passed transversely through said members to project beyond the outer sides thereof, and springs *e e* are located upon said projecting ends to exert a pressure upon the separable members against the

outer sides thereof. For this purpose the springs are confined at their outer ends by stops, in one instance the head of the bolt or interposed washer f' and in the other instance by means of the washer and nut f^2 and f^3, respectively. The bolt passes loosely through the separable members $a\ a$, so that the latter will be free to move thereon, and said bolt is so located with respect to the lower ends of the flanges c that the plate I may be slipped into place in the recesses or ways between said flanges and while the bolt is in place. In order to limit the movement of the members $a\ a$ toward each other after the sliding plate is withdrawn, a pipe or tube f^4 is mounted on the rod or bolt f and interposed between said members.

The operation of the clevis will be readily apparent from the foregoing description when taken in connection with the accompanying drawings, for supposing the U-shaped device or part A to be connected to a plow and the plate or part I to be connected to a traction-engine the latter would draw the former, so that such plow could be operated to the usual extent. However, should the plow meet an obstruction—such, for instance, as a large stone or well-rooted stump—the strain or tension on the draft connection would result in pulling the plate I from between the members $a\ a$ against the force of the springs, and thus the plow would be disconnected from the traction-engine and thereby saved from injury. The device therefore would act automatically to break connection between the engine and plow and would consequently result in preventing damage to the latter inasmuch as in many instances the operator of the engine could hardly stop the latter quick enough to prevent damage where the plow strikes a hidden obstruction.

When the parts become separated in use, they are again coupled by simply passing the plate I between the flanges $c\ c$ and sliding it forward into the recesses or ways a', the pressure of the springs preventing it from being pulled out until extraordinary strain comes upon the clevis. It will be noted that in use the plate I rests upon the flanges $d\ d$, for which purpose said flanges are wider and longer than the companion flanges $c\ c$, as heretofore stated.

As will be readily seen, the improved clevis is simple in construction, effective in operation, can be cheaply manufactured and sold at small cost, and in use will serve to greatly relieve the operator of the engine from all anxiety or fear of breaking the plow or other implement by contact of same with an obstruction.

Having thus described my invention, I claim—

1. A separable draft-clevis for the purpose set forth, comprising a device having separable hinged members curved at their outer or free ends, springs pressing against said members, and a plate in slidable and frictional engagement with the separable members and adapted to be released therefrom under a certain amount of pulling strain or tension.

2. A separable draft-clevis for the purpose set forth, comprising a U-shaped device providing separable members curved at their outer ends, flanges on the curved portions of the members forming recesses or ways, springs pressing against the separable members, and a plate in slidable and frictional engagement with the curved portions of the members in the ways thereof, whereby the plate will be detached by the lateral movement of the members against the force of the springs.

3. A separable draft-clevis for the purpose set forth, comprising a U-shaped device having separable hinged members curved inward at their outer ends, flanges extending inward from said curved portions to provide converging recesses or ways, and a plate in slidable and frictional engagement with the separable hinged members in the recesses or ways thereof.

4. A separable draft-clevis for the purpose set forth, comprising a U-shaped device having separable hinged members curved at their outer ends, lateral flanges extending from said curved portions to provide diagonally-disposed recesses or ways, springs pressing against said members, and a plate in slidable and frictional engagement with the curved portions of the spring-actuated members in the recesses or ways thereof, said plate being adapted to be released from the aforesaid members when sufficient tension is exerted on the parts of the clevis to overcome the force of the springs.

5. A separable draft-clevis for the purpose set forth, comprising a U-shaped device having separable members curved inward at their outer ends, flanges extending inwardly from said curved portions to provide converging recesses or ways, a bolt passed transversely through the separable members, and springs mounted on the bolt to bear against the members; together with a plate slidable between the separable members and held in frictional engagement therewith in the curved portions thereof, whereby said plate will become disengaged when sufficient pulling strain or tension is exerted to force the members apart.

6. A separable draft-clevis for the purpose set forth, comprising a U-shaped device having separable hinged members curved inward at their outer ends, flanges extending inward from said curved portions of the members to provide converging recesses or ways, a bolt passed transversely through the members to project beyond the latter, a pipe or tube mounted on the bolt and interposed between the members, and springs mounted on the

projecting portions of the bolt between the members and stops on the ends of said bolt; together with a plate slidable between the separable hinged members and held in frictional engagement therewith in the curved portions thereof, whereby said plate will become detached when sufficient pulling strain is exerted to force the members apart against the force of the springs.

7. In a separable draft-clevis for the purpose set forth, the combination, of a U-shaped device comprising separable hinged members curved inward at their outer ends, flanges extending inward from said members, the flanges at one side being longer and wider than those at the other side and said flanges providing recesses or ways, a bolt passed transversely through the members below the shorter flanges and projecting beyond the outer sides of said members, a pipe or tube mounted on the bolt and interposed between the members, and springs mounted upon the projecting portions or ends of the bolt and adapted to press against the members; together with a plate in slidable and frictional engagement with the separable members in the recesses or ways thereof, whereby the plate will become detached when sufficient pulling strain or tension is exerted on the parts to overcome the pressure of the springs, substantially as shown and described.

WILLIAM M. DEMING.

Witnesses:
WILLIAM L. PALMER,
MARK H. DEMING.