

No. 733,165.

PATENTED JULY 7, 1903.

W. F. DAVIS & J. C. MIKKELSON.

END GATE FASTENER.

APPLICATION FILED MAY 15, 1903.

NO MODEL.

Fig. 1.

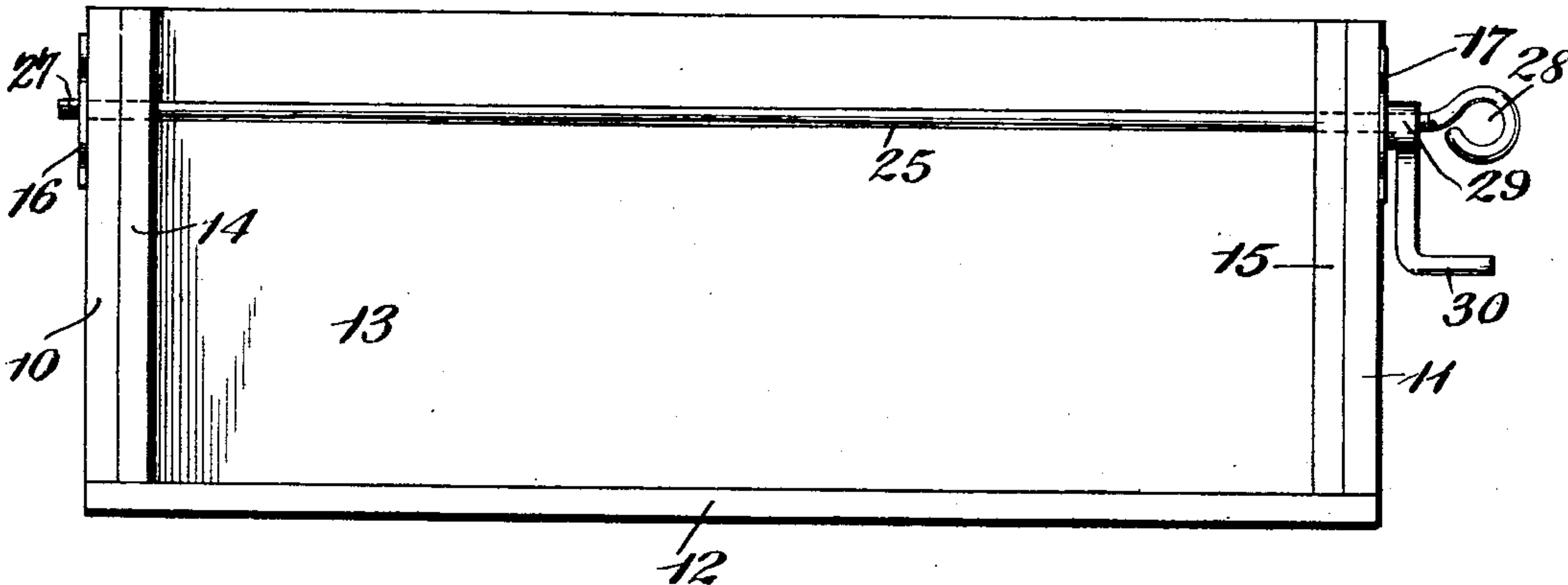


Fig. 2.

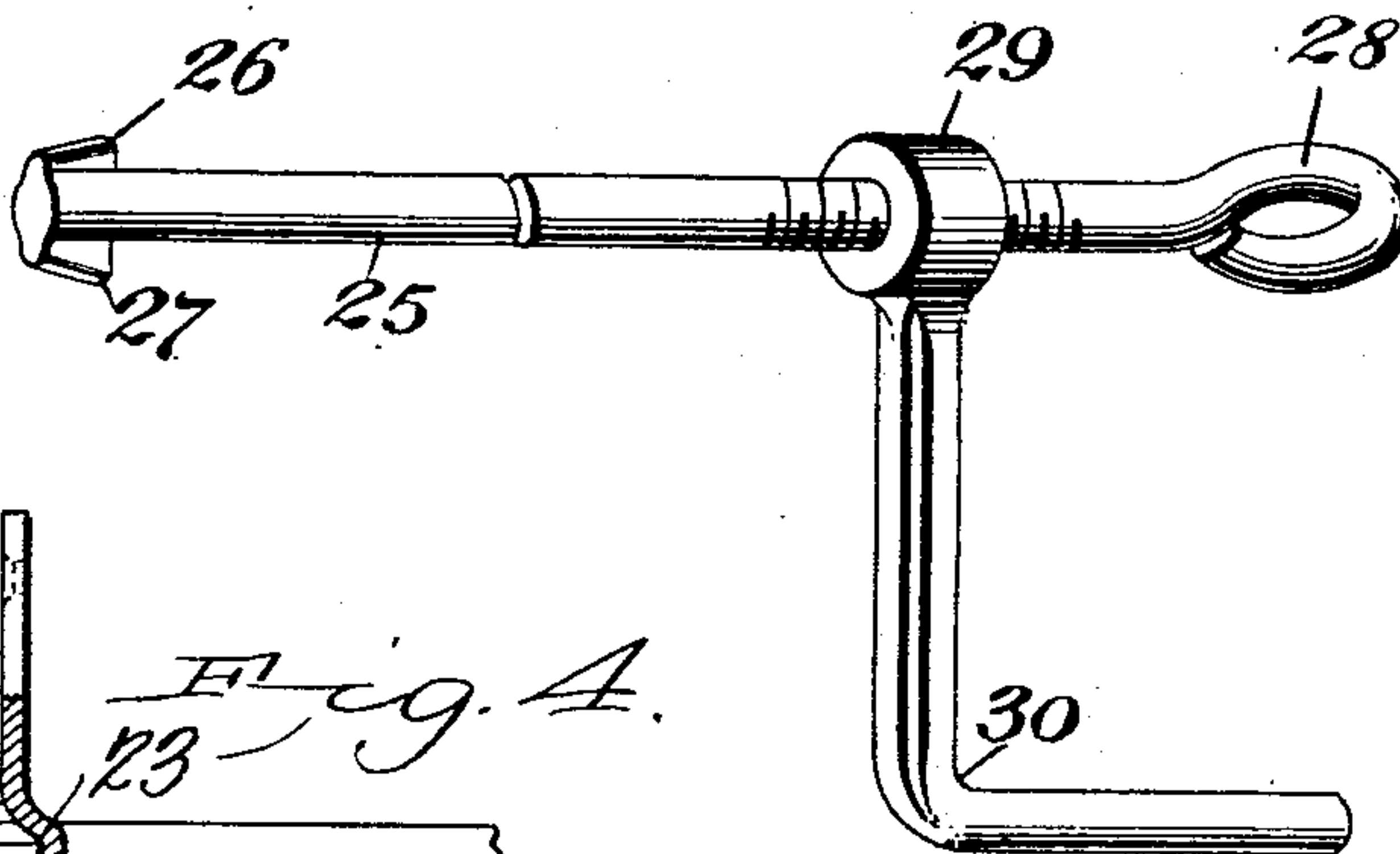
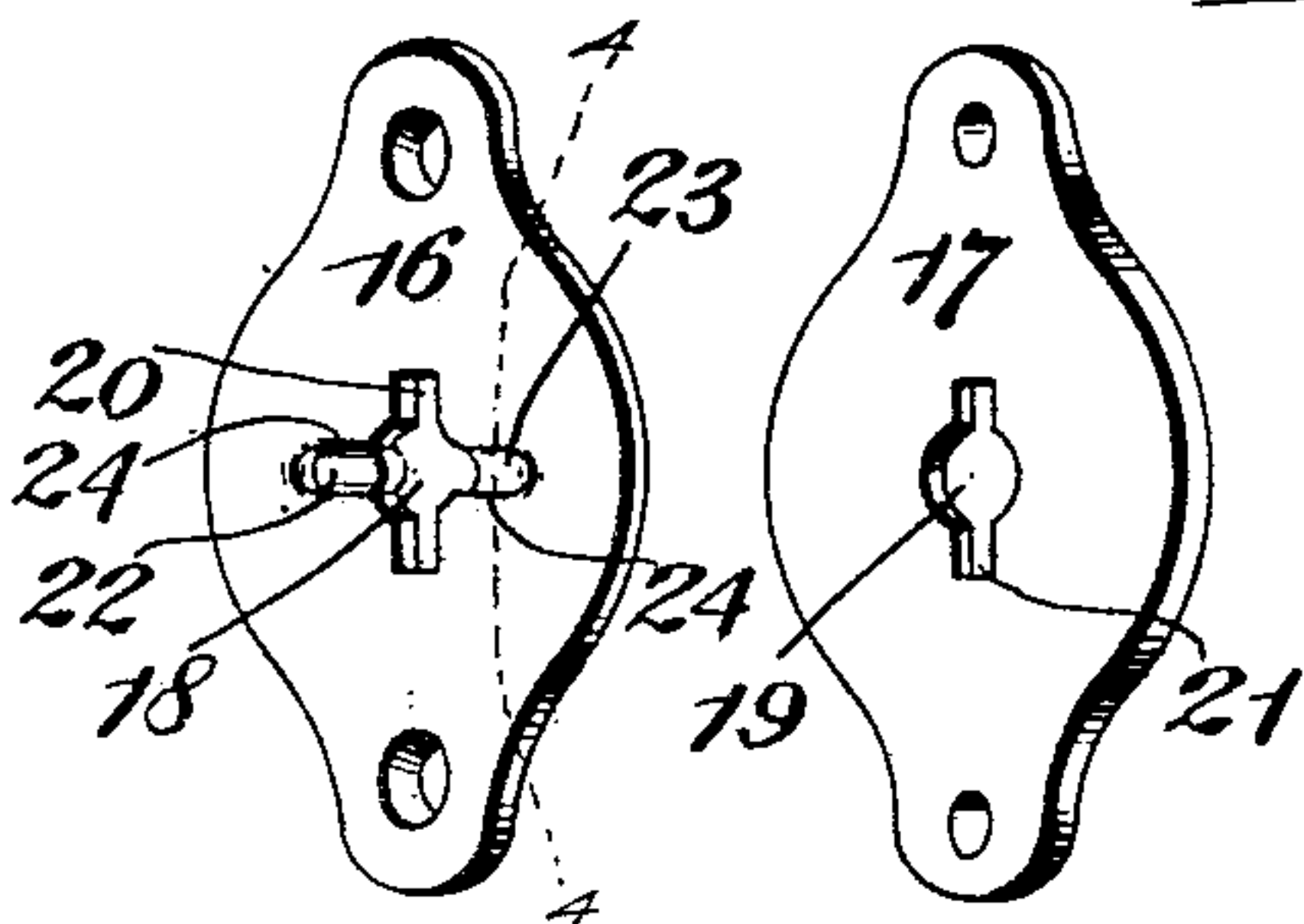


Fig. 4.

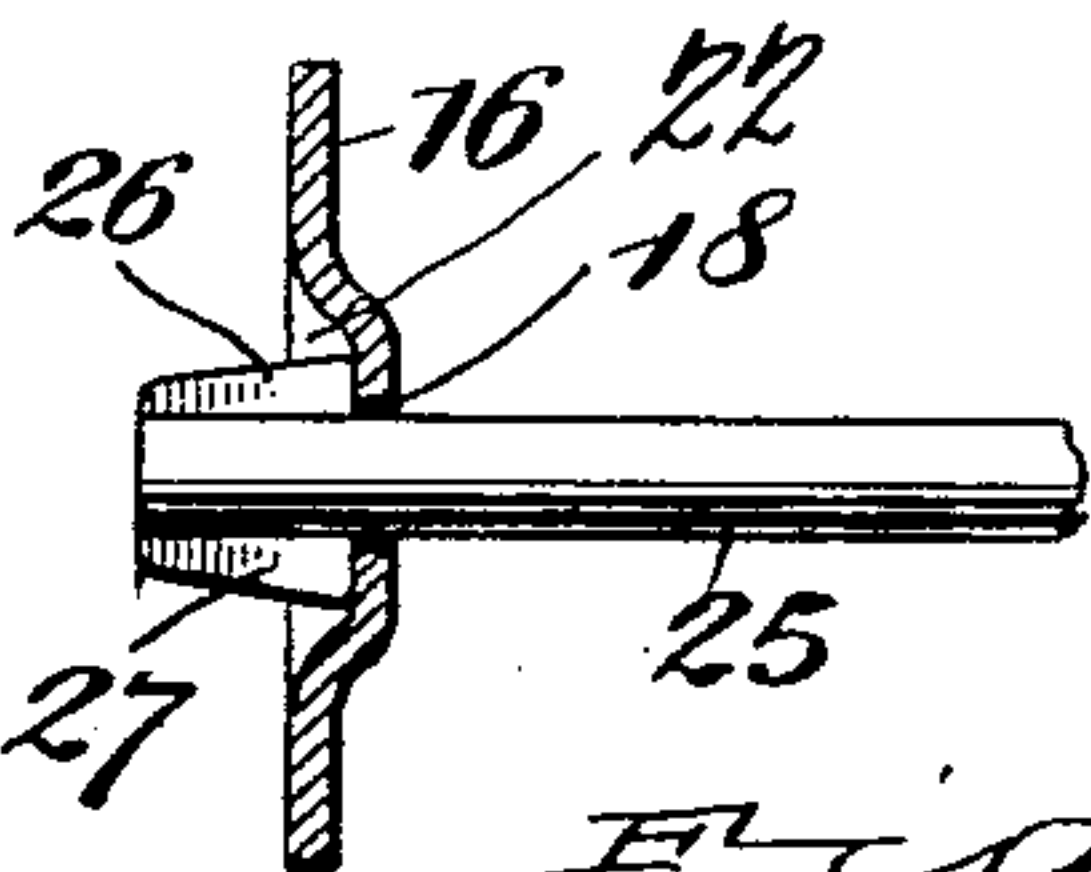


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM F. DAVIS AND JAMES C. MIKKELSON, OF UTICA, NEBRASKA.

END-GATE FASTENER.

SPECIFICATION forming part of Letters Patent No. 733,165, dated July 7, 1903.

Application filed May 15, 1903. Serial No. 157,274. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM F. DAVIS and JAMES C. MIKKELSON, citizens of the United States, residing at Utica, in the county of Seward and State of Nebraska, have invented a new and useful End-Gate Fastener, of which the following is a specification.

This invention relates to fasteners for the end-gates of wagon-boxes, and has for its object to provide a device of this character whereby the end-gates may be readily detached and attached and securely locked in place and without weakening or disfiguring the structure of the wagon-box; and the invention consists in certain novel features of construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a rear elevation of a wagon-box with the improvement applied. Fig. 2 represents the parts comprising the improvement enlarged and in perspective. Fig. 3 is an enlarged transverse section of the lock-plate with the clamp-rod in position therein. Fig. 4 is a view of the lock-plate in section on the line 4 4 of Fig. 2 with the clamp-rod in position therein.

The improved device is applicable to any of the ordinary forms of farm-wagon boxes and will preferably be arranged opposite to and extending through the cleats by which the tail-board or end-gate is supported, and for the purpose of illustration the device is shown thus applied, 10 11 representing the sides, 12 the bottom, 13 the tail-board, and 14 15 the tail-board cleats, of the usual construction.

The improved device comprises two metal plates 16 17, attached, as by screws or rivets, to the outer faces of the sides 10 11 opposite the outer cleats, as shown. The plates 16 17 are provided, respectively, with central apertures 18 19 and the apertures formed, respectively, with radial extensions 20, projecting from opposite sides of the central aperture, as shown in Fig. 2. The plate 16 is further provided with sockets 22 23 in its outer face and extending radially from opposite sides of the aperture 18 reversely to the extensions 20, as shown in Fig. 2, with the side walls of the

sockets curving outwardly and merging into the outer surface of the plate, as shown at 24 in Fig. 4. A clamp-rod 25 is adapted to be passed through the apertures 18 19 and provided with oppositely-extending lugs 26 27 at one end, to which the extensions 20 21 conform and by which means the rod is enabled to be passed through the plates. When this is accomplished and the rod rotated one-fourth of a revolution, the lugs will project transversely of the plate and opposite the sockets 22 23, into which they will be drawn when a longitudinal strain is applied to the rod. The lugs 26 27 are of less width than the diameter of the rod 25, and their combined area will not exceed the total area of the rod, as any metal in excess of that amount would be superfluous and add nothing of advantage to the structure. The opposite end of the rod terminates in an eye 28 and is threaded for a short distance adjacent to the eye, as shown, and provided with a nut 29, having an operating-arm 30, the nut engaging the outer surface of the plate 17 and producing the required "strain" upon the rod when rotated upon the threaded portion. The sides 10 11 and cleats 14 15 will be provided with apertures and radial extensions conforming to the apertures 18 19 and extensions 20 21 opposite these extensions, as will be obvious, to enable the rod to be inserted. By this simple arrangement it will be understood that sides 10 11 and end-gate 13 may be firmly clamped in place by merely thrusting the rod 25 through the apertures 18 19 and rotating it one-fourth of a revolution and then "setting up" the nut 29 30, which will cause the lugs 26 27 to enter the sockets 22 23 and hold the rod from either turning or being withdrawn. In this connection it will be noted that the inclined walls 24 of the sockets perform an important function, as they guide the lugs into the sockets and insure the proper coupling of the parts even if the rod is not rotated quite far enough or a little too far, as will be obvious. Another advantage possessed by the inclined walls 24 of the sockets is their ability to "run" the lugs out of the sockets by merely rotating the rod and without thrusting it endwise, so that in releasing the device when the nut 29 30 is slacked off the mere rotation of the rod by the eye 28 will release it,

as the lugs running over the inclined walls will move the rod longitudinally and carry the lugs over the extensions 20 21 in position to release the rod. The inclined walls of the sockets are therefore an important feature of the invention and add materially to the value and efficiency of the device.

Another important feature of the device is the eye 28 in the end of the rod 25, by which it is readily moved longitudinally and is a very convenient part of the device.

The device is very simple in construction, easily applied and operated, and does not disfigure or weaken the structure of the wagon-body.

The parts may be of any desired metal and of any suitable size to enable them to withstand the strains to which they will be subjected.

Having thus described the invention, what we claim is—

1. In an end-gate fastening, a plate having an aperture provided with oppositely-disposed extensions of less width than the aperture and with sockets sunken beneath the outer surface of the plate and disposed reversely to said extensions, and a rod conforming to said aperture and having oppositely-disposed lugs conforming to said extensions and adapted to engage said sockets when the rod is thrust through said aperture and rotated therein.

2. In an end-gate fastening, a plate having an aperture provided with oppositely-disposed extensions of less width than the aperture and with sockets sunken beneath the outer surface of the plate and disposed re-

versely to said extensions, and adapted for attachment to one side of a wagon-box, a plate adapted for attachment to the opposite side of the wagon-box and having an aperture with oppositely-disposed extensions conforming to the aperture and extension in the socket-plate, a rod conforming to and adapted to engage said apertures and having oppositely-disposed lugs conforming to said extensions and adapted to engage said sockets when the rod is rotated, and provided with an eye in its free end, and threaded adjacent to the eye, and a nut engaging said threaded portion of the rod, substantially as described.

3. In an end-gate fastening, a plate having an aperture provided with oppositely-disposed extensions of less width than the aperture and with sockets sunken beneath the outer surface of the plate and disposed reversely to said extensions, with the walls of the sockets curving outwardly and merging into the plate, and a rod conforming to said aperture and having oppositely-disposed lugs conforming to said extensions and adapted to be conducted into said sockets by said curving walls when the rod is thrust through said aperture, and rotated therein, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM F. DAVIS.
JAMES C. MIKKELSON.

Witnesses:

OTIS G. HUNTER,
JACOB SEVERIN.