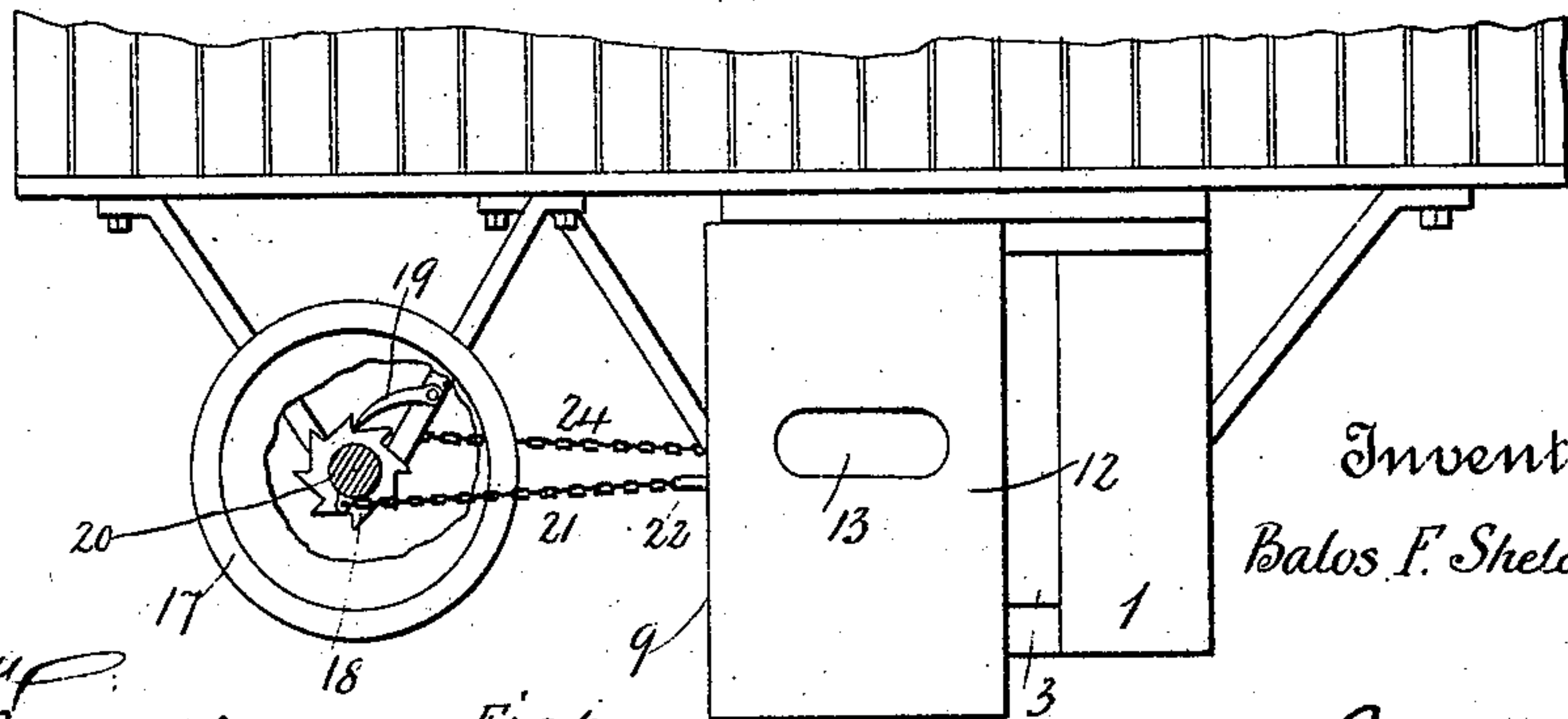
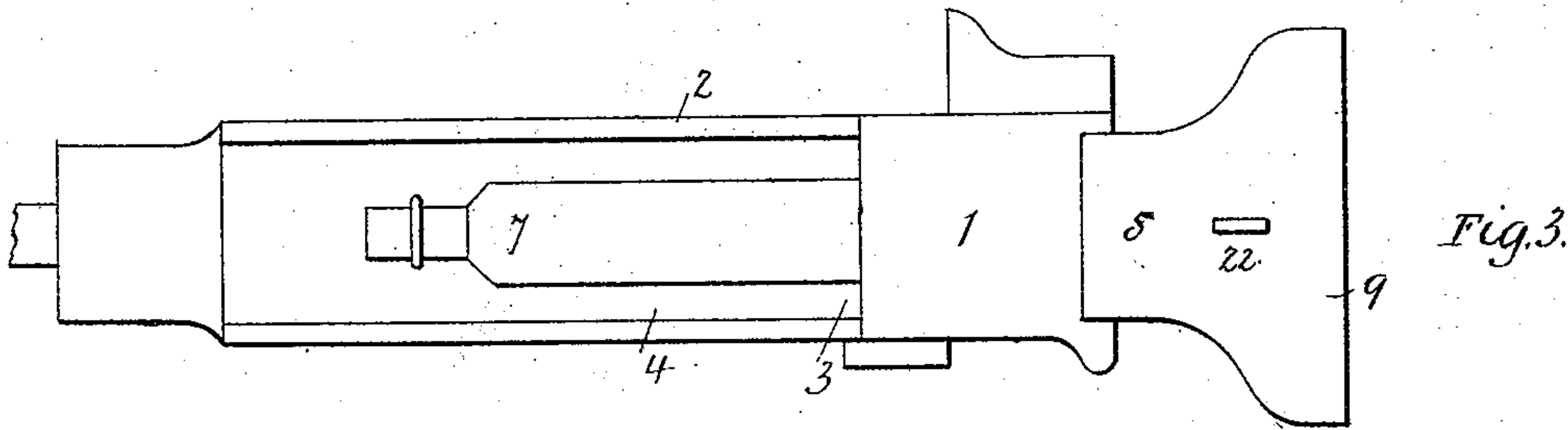
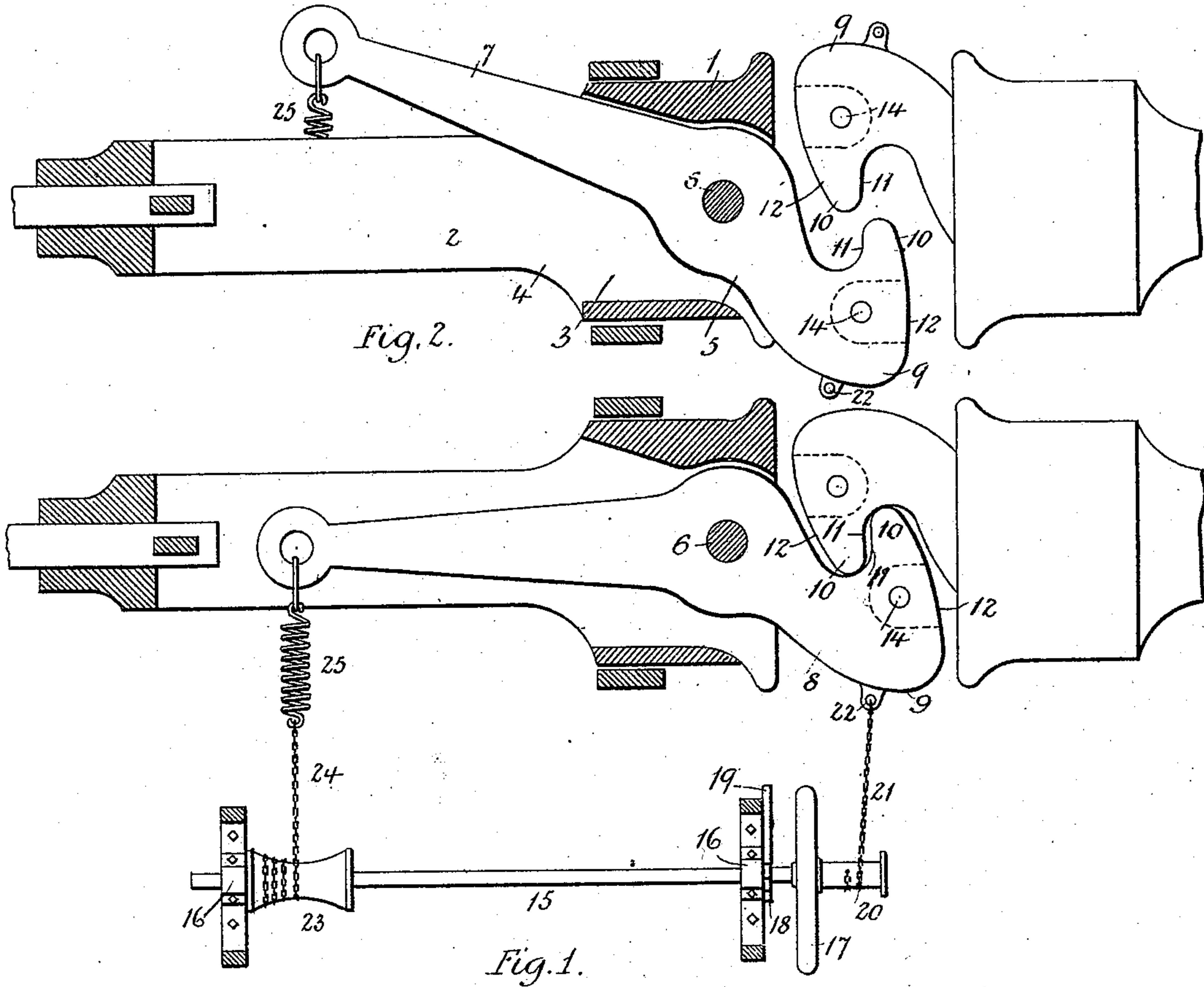


(No Model.)

B. F. SHELDON.
CAR COUPLING.

No. 500,961.

Patented July 4, 1893.



Witnesses

Will. I. Norton
Geo. H. Brown

Fig. 4.

Inventor
Bates F. Sheldon

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UNITED STATES PATENT OFFICE.

BALOS F. SHELDON, OF SAGINAW, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 500,961, dated July 4, 1893.

Application filed August 15, 1892. Serial No. 443,177. (No model.)

To all whom it may concern:

Be it known that I, BALOS F. SHELDON, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in car couplings of the class in which the draw head is provided with a clutch or hook for interlocking with the clutch or hook of the opposing draw head by the action of a spring. And the object of my invention is to provide a car coupling of this character in which the tension of the spring is released for carrying out the uncoupling operation, and in which the tension of the spring is set to retain the clutches in engagement with greater or less tenacity as desired, whereby the uncoupling of the heads is performed with great ease and facility, and the engaged draw bars are held in an interlocked position with great tenacity and reliability.

Another object of the invention is to provide a car coupling of the class mentioned, that can be cheaply and easily made of cast metal and be provided with the requisite strength and durability, and at the same time be easily and quickly coupled with cars having other forms of draw heads and coupling devices.

My invention consists in the combination and arrangement of the several parts and devices used in the construction of the apparatus, together with the arrangement and the operation of the same as will be explained in detail later on, and which will be especially set forth and enumerated in the claims of this specification.

In the drawings which accompany this specification the same figures of reference will be found designating the same parts throughout the several views.

Figure 1, represents a horizontal section of a draw head, and embodying my improvement and showing the position of the parts when the clutches of two drawheads are in engagement or coupled. Fig. 2, is a view of the same with the parts in position for uncoupling. Fig. 3, is a side view in elevation

of Fig. 1. Fig. 4, is a front view of the same—partly sectional.

1, represents a draw head having a body portion 2, extending beneath the end of a car and secured in position in any ordinary manner, and this draw head is provided with a central longitudinal opening 3, and with openings 4, on the lateral sides of its body portion 2. Within the opening 3, and with its outer end projecting beyond the open end thereof is placed a draw bar 5, pivoted in position by a vertical pin 6, passed through the draw head 1, and is provided with an inwardly extending arm 7, and with an outwardly extending arm 8, projecting beyond the outer end of the draw head. Upon the outer end of this arm 8, is arranged a clutch head 9, with a hook or clutch 10, having an inner vertical face 11, upon the inner lateral side thereof, and arranged to stand substantially at a right angle with the draw bar, while the outer face or end of the clutch head is arranged with a surface 12, sloping laterally from the extreme end of the bar to the inner portion of the clutch, while the opposite lateral corner of the end is rounded off, and provided with a horizontal chamber 13, for receiving the end of an ordinary coupling link, and with a vertical opening 14, for a pin, which may be required with the link in an emergency. The upper and lower sides of the clutch are extended considerably above and below the arm 8, so as to provide a vertical dimension for the face 11, which will allow two opposing clutches situated on different horizontal planes, to interlock and overlap each other sufficiently to insure a suitable and strong connection for pulling heavy trains. Upon the outer lateral side of the draw head, and near to the lateral side of the car is placed a shaft 15, arranged in a position parallel with the draw head, and is journaled in position in suitable boxes 16, supported beneath the car body, the outer end of the shaft extending beyond the car body, and upon this end portion is mounted a hand wheel 17, for revolving the shaft and also a ratchet or toothed wheel 18, while 19, is a pawl, pivotally secured to the car body or other suitable stationary support, and with its free end arranged to engage with the teeth of the wheel 18, for retaining the shaft against revolution. The

front end of the shaft preferably projects beyond the wheel and is provided with a spool 20, and upon this spool is secured one end of a chain 21, and arranged to lead away from the under side of the spool to the clutch head 9, to the outer lateral side of which the opposite end of the chain is secured by an eye 22, or other suitable contrivance.

Upon the inner end portion of the shaft 15, is mounted a spool 23, of a greater diameter than the spool 20, and upon this spool is secured one end of a chain 24, which is arranged to lead away from the upper side of the spool or the side opposite the chain 21, so that as the shaft is revolved one chain will be wound upon its spool, while the other chain will be unwound from its spool, and the opposite end of the chain 23, is connected to one end of a coiled or other suitable spring 25, while the other end of the spring is connected to the inner end of the arm 7, of the draw bar. It will be noticed that by revolving the shaft in one direction the chain 24, is paid out or run off of the spool 23, to allow the arm 7, to swing inward, while the chain 21, is wound upon the spool 20, so as to draw outwardly upon the clutch head for oscillating the draw bar upon its pivot, and the bar is then in a position for coupling or uncoupling the clutches, and when the shaft is revolved in the opposite direction the chain 21, is paid out or slackened, while the chain 24, is wound upon the spool so as to place a tension upon the spring 25, which retains the head 9, in a position interlocked with an opposing head, but allows a free side oscillation of the heads so as to securely hold the clutches into engagement to compensate for any side oscillation of the cars when two heads are coupled together; when it is desired to uncouple two interlocked clutches, the shaft 15, of one of the cars is revolved to draw the clutch head connected therewith outwardly, and release the tension of the spring thereon, and then the heads can be moved apart without touching each other, and the parts being left in this position will be ready for coupling again when desired. The two opposing clutches being brought together for coupling, the shaft is revolved by means of the hand wheel until the clutches are interlocked and the proper tension is placed upon the spring, and the pawl 19, is then engaged with the ratchet wheel 18, and the shaft is retained against revolution and the clutch heads are held in engagement. It will be noticed that by the use of the shaft and pawl and ratchet movement, the tension of the spring is entirely released before the uncoupling action is begun, so that there is no power required to counteract the effect of the spring, and the uncoupling is effected with great ease and facility, while for coupling the clutches together, no great exertion of power is required, except to place the proper tension in the spring, and this is not great as the length of the arm 7, is several times the

length of the arm 8, so that great power of the spring is not required. When required to couple automatically the two draw bars are set with the required tension in their respective springs, and the heads are then pushed together, and their outer inclined surfaces 12, coming against each other causes the heads to move outwardly in opposite directions and pass into engagement with each other. Of course it will be understood that while I have explained the shaft and chains as located and attached in a certain position and manner, and also described a coiled spring as being best adapted for use in connection therewith, I do not limit my invention precisely to all the details herein shown as peculiar constructions of cars would no doubt require modifications and changes to be made in the arrangement and locations of these parts, the intent and meaning of the invention being to so arrange the parts as to remove the tension from the spring when desired to uncouple and to place the required tension in the spring for retaining the clutches in an interlocked position.

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

1. In a car coupling, the combination of the draw head provided with a longitudinal chamber having openings in its lateral sides, with a draw bar within the chamber and secured by a vertical pivot passed through the outer end of the draw head and bar, and provided with an outwardly extending short arm projecting from said chamber and provided on its innerside with a laterally extending clutch, and having an inwardly extending long arm, a spring secured to the long arm for actuating the bar to engage the clutch, and means substantially as described for releasing the spring and for disengaging the clutch, substantially as described.

2. In a car coupling, the combination of a draw head having a longitudinal chamber and carrying a draw bar 5, having a short arm 8, extending beyond the draw head and provided with a clutch head 9, and clutch 10, and having an inwardly extending long arm 7, with a shaft 15, mounted in boxes secured to the car, and carrying on its outer end a spool 20, and on its inner end a spool 23, a chain 21, with one end secured to and leading from the underside of the spool 20, and with its opposite end secured to the outer side of the clutch head, a chain 24, having its outer end secured to and leading from the upper side of the spool 23, a spring 25, secured by one end to the inner end of said chain 23, and with its opposite end secured to the inner end of the arm 7, and means for revolving the shaft and for retaining it against revolution, substantially as set forth.

3. The combination in a car coupling of the draw head 1, provided with a body 2, and chamber 3, a draw bar 5, within the chamber and secured by a vertical pin 6, and provided

with an outwardly extending short arm 8, having a clutch head 9, and clutch 10, and provided with an inwardly extending long arm 8, carrying a spring 25, upon its inner end a shaft 15, journaled beside the drawhead, and carrying a spool 20, on its outer end and a spool 23, on its inner end, a chain 21, with one end secured to the draw head and its opposite end wound from the under side upon and secured to the spool 20, a chain 24, with one end wound from the upper side upon and secured to the spool 23, and with its opposite

end secured to the spring 25, a hand wheel 17, and ratchet wheel 18, mounted on the shaft, and a pawl 19, for engaging with the ratchet wheel for retaining the shaft against revolution, substantially as set forth.

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

BALOS F. SHELDON.

Witnesses:

GEO. P. THOMAS,
JAS. E. THOMAS.