No. 704,545. Patented July 15, 1902.

J. G. KANOUSE.

COUPLING DEVICE.

(Application filed Aug. 29, 1901.)

(No Model.)

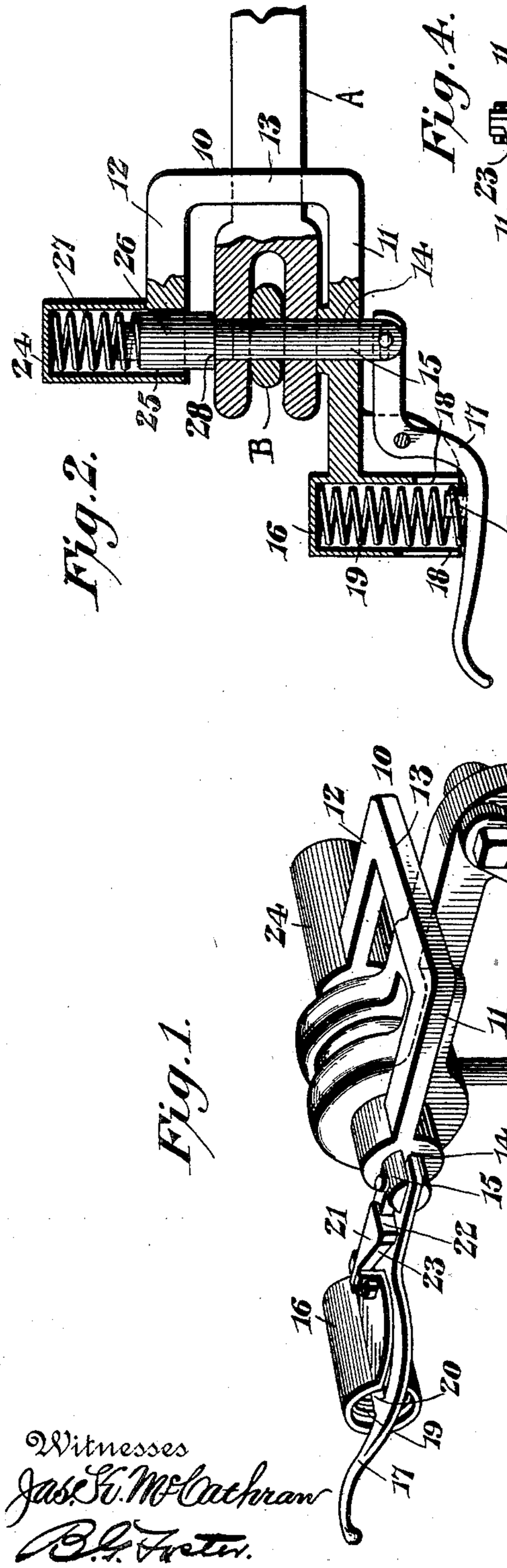

Fig. 2.

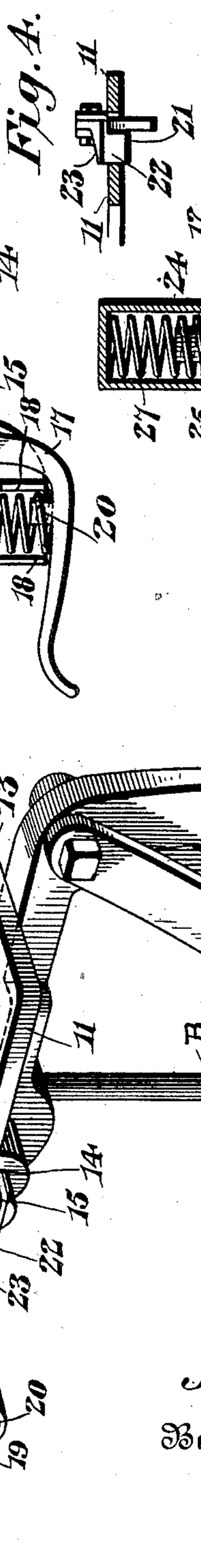

Fig. A.

Fig. 3.

Fig. 1.

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COUPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 704,545, dated July 15, 1902.

Application filed August 29, 1901. Serial No. 73,718. (No model.)

To all whom it may concern:

Be it known that I, JOHN GEORGE KANOUSE, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Coupling Device, of which the following is a specification.

This invention relates to a coupling device; and the object thereof is to provide a device of this character especially adapted for coupling the handle of a pump or the operating-rod of a wind-engine to the piston-rod of a pump.

More particularly, the object of the invention is to provide a coupling device in the form of an attachment which may be readily applied to any ordinary pump or wind-engine and when so applied is securely held against accidental displacement both in operative and inoperative position.

In order that a complete understanding of the invention may be acquired, the preferred form of construction is fully described in the following specification, taken in connection with the drawings which accompany and form a part of the same; but it will be understood that the construction thus shown and described is open to change and modification within the scope of the claims hereto appended.

In the drawings, Figure 1 is a perspective view of the preferred form of construction. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a view similar to Fig. 2, but showing portions in elevation and the coupling-pin in retracted position. Fig. 4 is a vertical detail sectional view on the line X X of Fig. 3, more clearly illustrating the relation and operation of the locking-dog.

Similar characters of reference designate corresponding parts in all the figures of the drawings.

In carrying out the invention according to the construction shown a frame 10 is provided, which is in the shape of a yoke comprising a pair of substantially parallel arms 11 and 12, connected at one end by the cross-bar 13.

The arm 11 is somewhat longer than the arm 12 and is provided with an opening 14 intermediate its ends, in which is slidably mounted a coupling-pin 15, that projects into the space between the two arms. The end of the arm 11 is provided with an enlarged head 16, the outer side edge of which is bifurcated to receive a lever 17, pivoted therein, one end of this lever being connected to the outer end of the coupling-pin 15 and the other end being formed into a handle, by means of which the pin 15 may be slid back and forth, as will be readily understood. In order, however, to normally hold the pin 15 in operative position, the head 16 has a transverse socket 18, in which is seated a coiled spring 19, that bears against the under side of the outer arm of the lever, being held in place thereon by a stud 20, around which the end of the coiled spring is placed. In order, however, to hold the pin 15 in retracted position when so desired, a gravity-dog 21 is pivoted upon the upper face of the head 16 contiguous to the inner end edge of the same. This dog has an enlarged upper portion 22, the outer face of which is inclined, as shown at 23, and is adapted to drop behind the inner arm of the lever when it is in an outer position, as clearly shown in Fig. 3.

The end of the arm 12 is provided with an angular extension 24, having a socket 25, the mouth of which is directly opposite the opening 14 of the arm 11. In this socket is slidably mounted a locking-bolt 26, that projects into the space between the arms 11 and 12 and normally abuts against the end of the coupling-pin 15, being yieldingly held in this position by means of a coiled spring 27, which is housed within the socket 25 and bears against the rear end of the bolt. The projecting end of the bolt 26 is cut away to form an annular shoulder 28.

The application of the device will be readily seen. The coupling-pin 15 is retracted and the bolt 26 is forced back, after which the yoke is placed over the bifurcated end of the pump-handle A, wind-engine pitman, or other device, to which it is to be applied. When the bolt alines with the opening, it will be forced into the same by means of the spring 27; but this movement will be limited by the shoulder 28. Likewise, when the coupling-pin alines with the opposite opening it will be urged into the same by the spring 19, and thus the device will be securely locked in place. At the same time the dog will hold the coupling-pin in retracted position, as

shown in Fig. 3, thus leaving the bifurcation open for the ready insertion of the piston-rod B or other device to be coupled thereto. When it is desired to couple the two together, it is only necessary to aline the opening of the piston-rod B with that of the handle A, raise the dog 21, and thus allow the coupling-pin to pass through the alined openings, as shown in Fig. 2.

When it is desired to disconnect the elements, it is only necessary to withdraw the bolt until the dog 21 drops behind the lever. This will leave the piston-rod entirely disconnected, but the coupling device will still be locked securely upon the handle or pitman ready to be again thrown into immediate operative position. In practice where a wind-engine and pump is employed a pair of these devices will be used, one upon the pitman and the other upon the pump-handle, although but one is absolutely necessary, and should the pump piston-rod be provided with the bifurcated end but one will be employed. By this means it will be observed that a coupling device is provided which is in the form of an attachment that can be applied to any ordinary pump or wind-engine and by means of which the operating elements may be connected or disconnected easily and quickly. At the same time the attachment is always locked securely in place against accidental displacement.

While the invention has been described throughout in connection with the pump, it will be seen that it may be used for connecting various elements together, and it is to be understood that it is not to be limited for use in connection with a pump or wind-engine.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. The combination with a pair of elements to be coupled, said elements being disposed in overlapping relation, of a coupler comprising a frame separate from the elements and a locking device movably mounted upon the frame and engaging the overlapping portions of both elements to secure them together, said device being movable out of engagement with one of the elements but remaining in engagement with the other and constituting means for securing the coupler upon said latter element.

2. The combination with a pair of elements to be coupled, said elements being disposed in overlapping relation, of a coupling comprising a yoke that embraces both elements, and a coupling-pin slidably mounted upon the yoke and detachably engaging the overlapping portions of both elements to couple the same, said coupling-pin being movable out of engagement with one of the elements but remaining in engagement with the other and constituting means for securing the coupler upon said latter element.

3. An attachment of the class described, comprising a frame having spaced arms arranged to embrace a plurality of elements, a locking device movably mounted on one arm and arranged to engage one of the elements and a coupling-pin slidably mounted on the other arm and adapted to detachably engage all of the elements to secure them together.

4. An attachment of the class described, comprising a yoke arranged to embrace a plurality of elements, a coupling-pin slidably mounted upon one arm of the yoke and movable into the space between both arms, said pin being arranged to engage the elements to couple them and when in retracted position having its inner end projecting into the space between the arms of the yoke to engage the outer element, thereby constituting locking means for holding the attachment on said element.

5. An attachment of the class described, comprising a frame having spaced arms arranged to embrace a plurality of elements, and a locking device carried by each arm, said devices being arranged in substantial alinement and movable toward and from each other.

6. An attachable coupling device of the class described, comprising a yoke adapted to embrace a plurality of elements, a locking-bolt carried by one arm of the yoke and arranged to engage one of the elements, and a coupling-pin carried by the other arm of the yoke and arranged to engage all of said elements to couple them.

7. An attachable coupling device, comprising a yoke adapted to embrace a plurality of elements, a locking-bolt carried by one arm of the yoke and arranged to engage one of the elements, a coupling-pin carried by the other arm of the yoke and arranged to engage all of said elements to couple them, and means for operating said coupling-pin.

8. An attachable coupling device, comprising a yoke adapted to embrace a plurality of elements, a locking-bolt carried by one arm of the yoke and arranged to engage one of the elements, a coupling-pin carried by the yoke and arranged to engage all of said elements to couple them, and means for holding the coupling-pin in retracted position.

9. An attachable coupling device of the class described, comprising a yoke, a spring-pressed locking-bolt carried by one of the arms and adapted to engage one of the elements to be coupled, a spring-pressed coupling-pin carried by the other arm and adapted

to engage all the elements to couple them, an operating-lever connected to the coupling-pin, and a dog arranged to engage the lever to hold the coupling-pin in retracted position but in engagement with the same element engaged by the locking-bolt.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN GEORGE KANOUSE.

Witnesses:
C. D. KANOUSE,
FRANK M. MENHARD.