No. 717,472. Patented Dec. 30, 1902.

J. W. THOMPSON.

GAB.

(Application filed June 2, 1902.)

(No Model.)

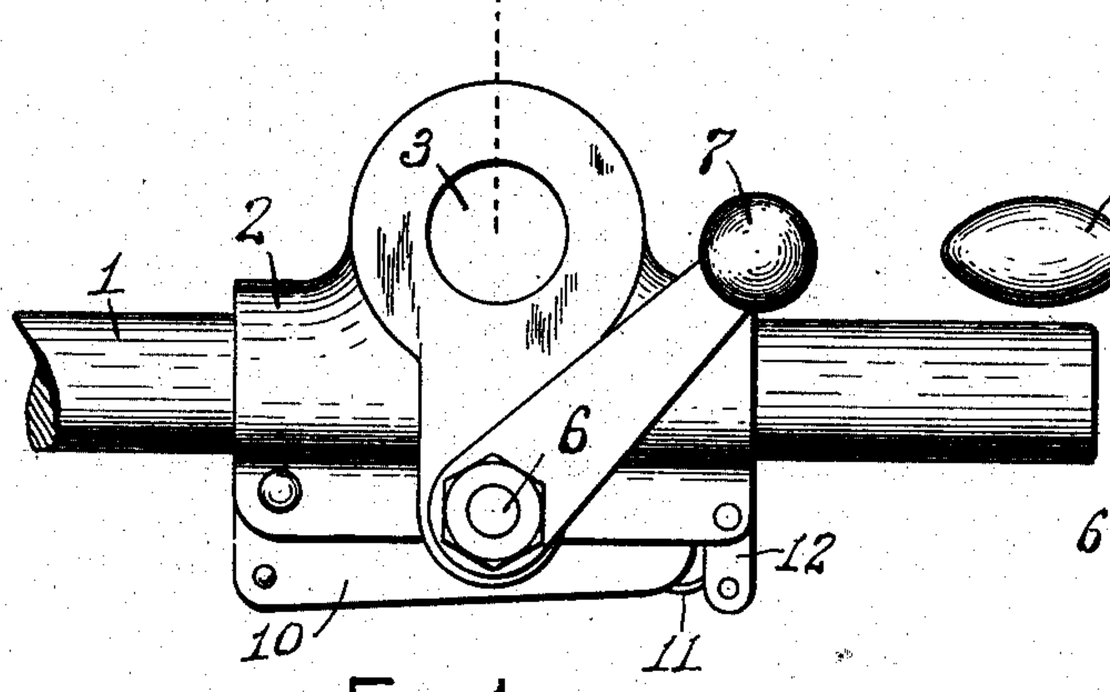

FIG. 1.

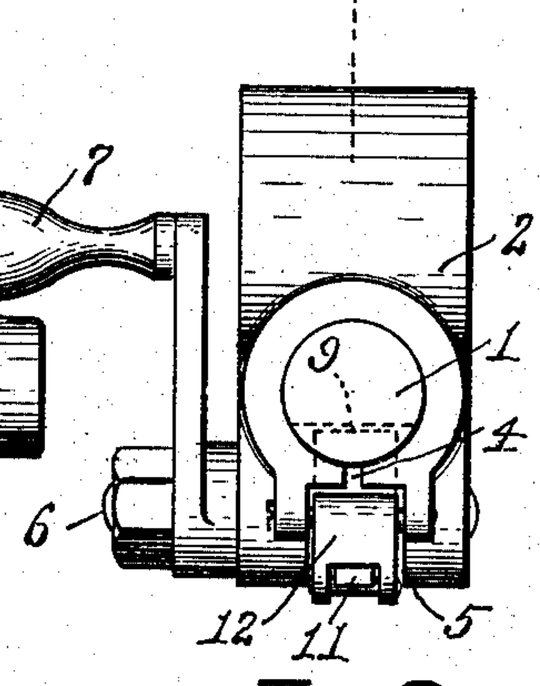

FIG. 2.

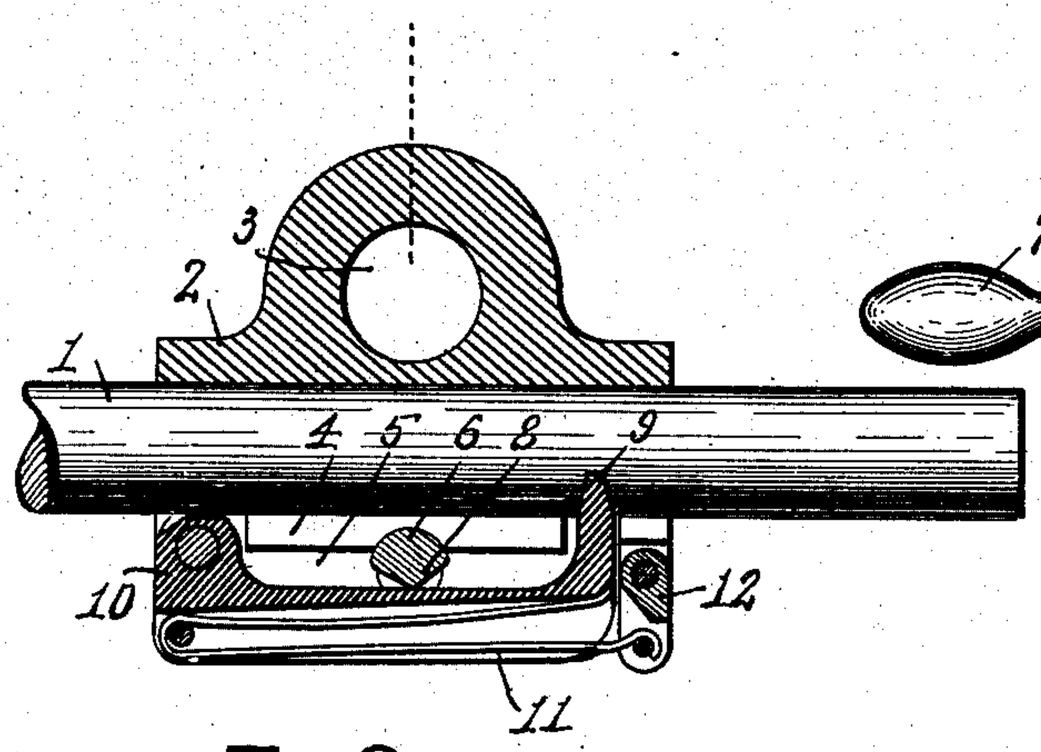

FIG. 3.

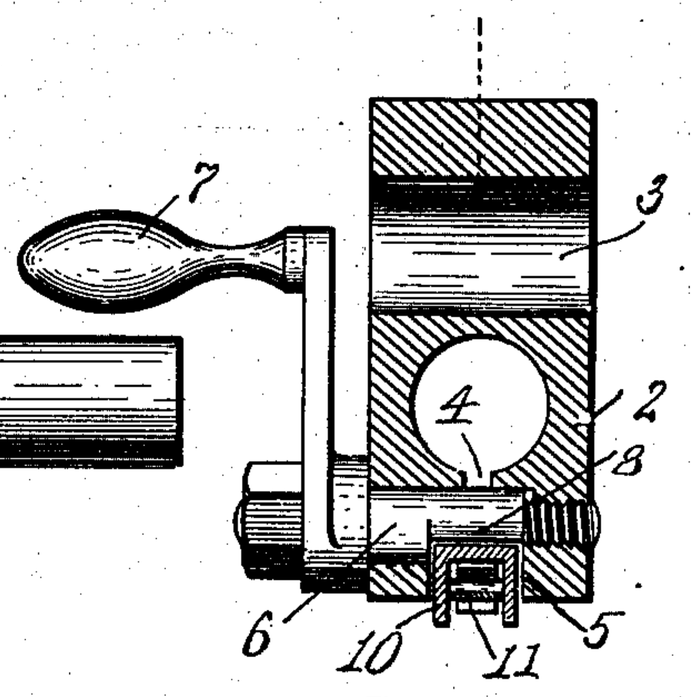

FIG. 4.

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UNITED STATES PATENT OFFICE.

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GAB.

SPECIFICATION forming part of Letters Patent No. 717,472, dated December 30, 1902.

Application filed June 2, 1902. Serial No. 109,897. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. THOMPSON, a citizen of the United States, residing at Salem, Columbiana county, Ohio, have invented certain new and useful Improvements in Gabs, of which the following is a specification.

This invention, pertaining to improvements in gabs, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a gab exemplifying my present invention; Fig. 2, an end elevation of the same; Fig. 3, a vertical longitudinal section of the same, and Fig. 4 a vertical transverse section of the same.

In the drawings, 1 indicates the rod, between which and some other machine member reciprocating motion is to be transmitted; 2, a block fitted for sliding motion on the rod and exemplifying the machine member which is to reciprocate in unison with the rod when clutched to it; 3, a bearing in block 2 to adapt it for connection with a wrist, it being understood that my present invention, while suited to many situations in machine construction, has been designed primarily as an element in a train of transmitting mechanism between an eccentric and a valve-rocker; 4, a longitudinal slit splitting the lower portion of the block, so that it may be contracted upon the rod; 5, an open longitudinal groove in the base of the block, forming a widening of the lower portion of the slit 4; 6, a clamp-screw passing through the front wall of the slitted portion of the block and threaded into the rear wall, whereby the turning up of this screw clamps the block firmly to the rod; 7, a handle upon the clamp-screw, whereby the latter may be conveniently turned; 8, a cam formed upon that portion of the clamping-bolt which overlies the groove 5; 9, a tapering notch in the under surface of the rod; 10, a latch pivoted in the groove 5 of the block, its free end being formed with a tooth adapted for interlocking engagement with notch 9, this latch underlying the cam 8; 11, a bent spring housed within a groove formed in the lower surface of the latch, the spring acting upwardly upon the latch and tending to urge its tooth into the notch of the rod, and 12 a shackle pivoted to the spring and block and serving to furnish an abutment for the spring.

Assume that the parts are in the position indicated in the drawings, with the latch-tooth in engagement with the rod, the clamp-screw tightly clamping the block to the rod. Under these conditions the block is firmly united to the rod, and consequently any reciprocations on the part of one of these members will be transmitted to the other without lost motion. Such is the normal condition of the device.

If it be desired to disconnect the block from the rod, so that one may reciprocate independent of the other, then handle 7 is turned to release the clamp and then still farther turned to cause cam 8 to depress the latch, so that its tooth will be free of engagement with the notch in the rod. When the block is thus unclutched from the rod, the parts may reciprocate independently, smoothly, and without interference with each other, the tooth of the latch being down below the surface of the rod, so as not to tend to engage in the notch. If it be desired to again clutch the block to the rod, handle 7 is actuated to free the latch from restraint and permit the spring to force the tooth up into the notch of the rod when the tooth and notch come opposite each other. When an instant of time has been given to permit the tooth to seek fairly home in the notch, then the handle may be turned still farther to clamp the block firmly to the rod. There are many circumstances of use in which a temporary clutching only is required, in which case the final clamping may be omitted, it being manifest that the device embodies practically two clutching systems, one represented by the latch and the other by the clamp, and either being efficient alone as far as mere transmission of motion between the parts is concerned; but the latch serves in indexing the block upon the rod, so as to secure a normal relationship of the two members when clutched, the clamp serving to ultimately bind the parts firmly together and relieve the latch of driving duty.

The housing of the latch within the groove of the block and the housing of the spring

within the groove of the latch renders the affair compact and tidy-looking and easily cleaned.

I claim as my invention—

1. In a gab, the combination, substantially as set forth, of a rod provided with a notch, a block mounted for sliding motion on the rod and slitted so as to be clamped thereto, a clamp-screw arranged to contract the slitted block, a latch mounted in the block independent of said clamp-screw and having a tooth adapted to engage said notch, a handle fast on said clamp-screw, and a cam connected with said handle and serving to release the latch as the clamp-screw is turned in unclamping direction.

2. In a gab, the combination, substantially as set forth, of a rod provided with a notch, a block mounted for sliding motion on the rod and slitted so as to be clamped thereto, a clamp-screw arranged to contract the slitted block, a latch mounted in the block independent of said clamp-screw and having a tooth adapted to engage said notch, a cam upon the body of the clamp-screw and engaging the latch, and a handle for turning the clamp-screw.

3. In a gab, the combination, substantially as set forth, of a rod provided with a notch, a block mounted for sliding motion on the rod and slitted so as to be clamped thereto and provided with a longitudinal groove, a latch pivoted in the groove of the block and having a tooth adapted to engage said notch, a handled clamp-screw crossing the plane of the latch and serving to clamp the block to the rod, and a cam upon the clamp-screw for actuating the latch.

4. In a gab, the combination, substantially as set forth, of a rod provided with a notch, a block mounted for sliding motion on the rod and slitted so as to be clamped thereto and provided with a longitudinal groove, a latch pivoted in the groove of the block and having a tooth adapted to engage said notch, a handled clamp-screw crossing the plane of the latch and serving to clamp the block to the rod, a cam upon the clamp-screw for actuating the latch, and a spring seated in a groove in the latch and acting between the latch and block to urge the tooth into said notch.

5. In a gab, the combination, substantially as set forth, of a rod provided with a notch, a block mounted for sliding motion on the rod and slitted so as to be clamped thereto and provided with a longitudinal groove, a latch pivoted in the groove of the block and having a tooth adapted to engage said notch, a handled clamp-screw crossing the plane of the latch and serving to clamp the block to the rod, a cam upon the clamp-screw for actuating the latch, a shackle pivoted to the block, and a spring seated in a groove in the latch and acting between said shackle and the latch and serving to urge the tooth into said notch.

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Witnesses:
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