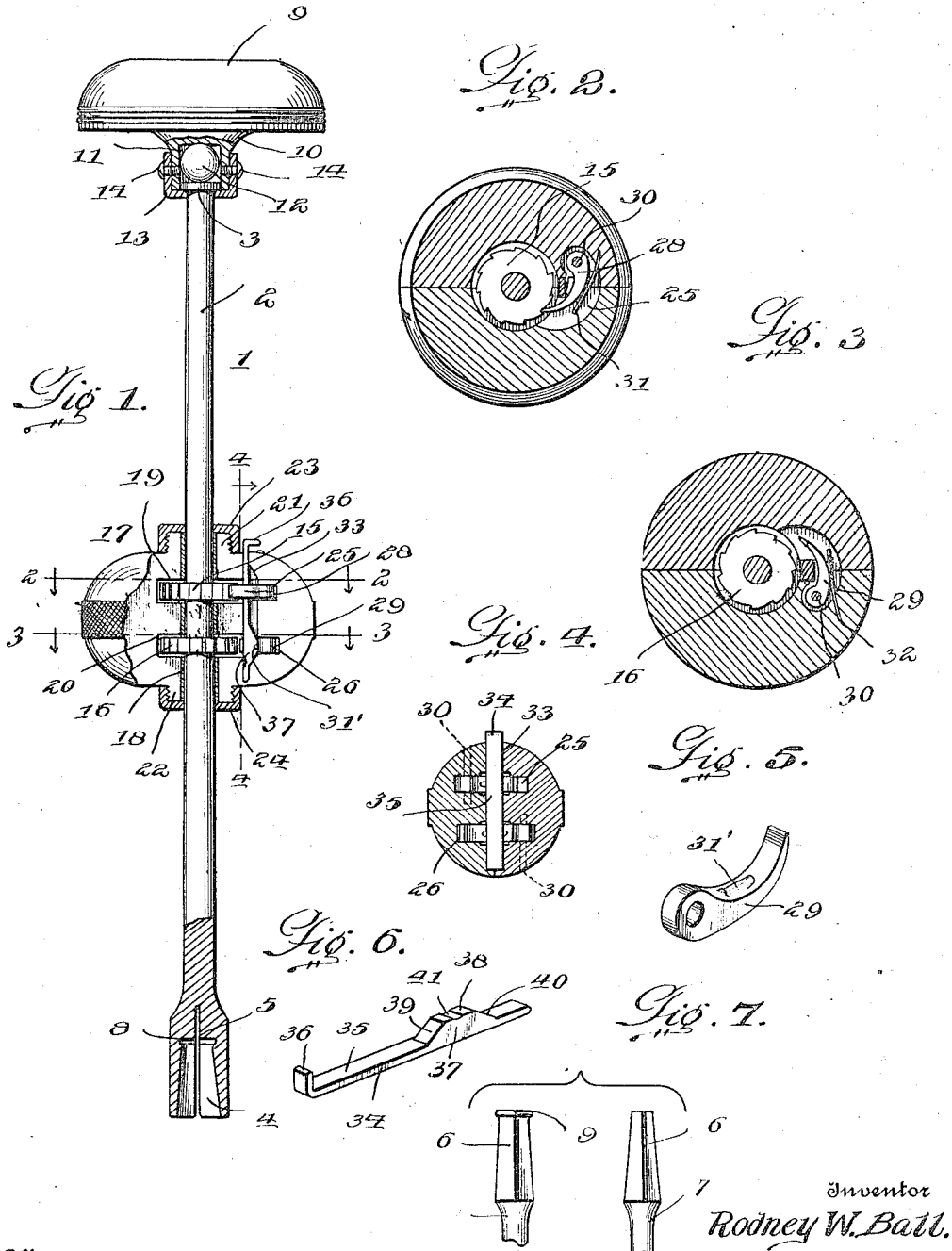


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STOCK.

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Witnesses

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STOCK.

1,163,500.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RODNEY W. BALL, a citizen of the United States, residing at Purcellville, in the county of Loudoun and State of Virginia, have invented new and useful Improvements in Stocks, of which the following is a specification.

The present invention relates to improvements in stocks for holding and rotating tools, such as screw driver bits, a boring bit or the like, and the primary object of the invention is the provision of means whereby the stock may be rotated easily and in an expeditious manner to operate the bit either in a right or a left hand rotary direction.

Another object of the invention is to provide a stock with a head having anti-frictional bearings between the same, to arrange upon the stock an operating knob and to provide the same with means for coöperating with the stock to permit of the said stock being rotated either in a left or right handed direction, said means being such as to also sustain the stock against rotary movement when desired.

A still further object of the invention is the provision of a stock having one of its ends formed with a socket which is slotted longitudinally to provide a number of spring jaws, which will readily give to permit of the insertion of the tapered or angular end of a tool, and to compress against the said tool when received within the socket.

Other objects and advantages of the device will appear as the nature of the invention is more fully understood, reference being had to the accompanying drawings, in which there is illustrated a simple and satisfactory reduction of the improvement to practice, the nature of the invention being such as to render the same susceptible to changes in minor details of construction, which, however, fall within the scope of the appended claim.

In the drawings: Figure 1 is an elevation of a device constructed in accordance with the present invention, parts being shown in section, Fig. 2 is a section on the line 2—2 of Fig. 1, Fig. 3 is a similar section on the line 3—3 of Fig. 1, Fig. 4 is a sectional view on the line 4—4 of Fig. 1, Fig. 5 is a perspective view of one of the pawls, Fig. 6 is a similar view of the sliding pawl control member, and Fig. 7 illustrates detail views of two forms of bits which may be arranged

within the socket of the stock. Fig. 8 is a detail sectional view illustrating the stock arranged upon the head without the employment of the anti-frictional spherical member.

In the accompanying drawings, in which like characters of reference designate corresponding parts throughout the several views, the numeral 1 designates my improved instrument in its entirety. This instrument includes a stock 2 which is preferably in the form of a round rod, and which has one of its ends formed with an enlarged annular flange 3, its second end being enlarged and depressed centrally and longitudinally to provide a socket 4. The walls of the socket are operated longitudinally, as at 5, to provide the same with a plurality of independent jaws, each of which exerting an inward tension toward the socket proper, so as to engage with the beveled upper ends 6 of bits 7. The side walls of the socket 4, at their juncture with the inner straight wall, are preferably recessed, as at 8, and one end 6 of one of the instruments 7 may have its reduced outer end formed with a bead 9, which will be received within the recess 8. In this connection it should be stated that the socket end of the stock is formed with resilient material, so that the portions 6 of the bit will be at all times retained therein, but which at the same time will, through the medium of the slits 5, yield to a direct longitudinal pull upon the bits to permit of the same being disengaged by and removed from the socket.

The numeral 9' designates a knob-shaped head which has its underface centrally formed with an annular extension 10, the same being recessed to provide a pocket 11, within which the flange 3 of the stock 2 is received. Also arranged within the pocket 11 is a spherical anti-frictional member 12 which rests upon the head and contacts with the inner wall of the pocket.

The numeral 13 designates a flanged sleeve which engages beneath the flange 3 of the stock 2 and which is secured, as at 14, to the portion 10 of the head 9'.

Securely connected to or integrally formed with the stock 2 is a pair of spaced ratchet wheels 15 and 16 respectively, the teeth of the wheel 15 being arranged at an opposite inclination to the teeth of the wheel 16.

The numeral 17 designates the operating member for the stock. This member 17 is

preferably of a spherical formation, and has its outer face preferably milled. The member 17 is provided with a longitudinal bore 18 through which the stock 2 extends, and is provided with annular recesses 19 and 20 respectively to receive the ratchet wheels 15 and 16 respectively. The spherical operating member 17 preferably comprises two similar sections, so that the same may be readily arranged upon the stock 2, the opposite ends of the said member 17 being formed with nipples 21 and 22 respectively which are threaded, and which are adapted to receive the threaded annular portions of thimbles 23 and 24 respectively, and whereby the said member 17 is sustained upon the stock. The depressions 19 and 20, on one side of the operating member communicate with reduced depressions 25 and 26 respectively within each of which is arranged a similarly constructed pawl 28 and 29 respectively. The working teeth of the pawl are, of course, arranged in opposite directions, so that they will contact with the opposite angularly disposed teeth of the wheels 15 and 16, pins 30 passing through the members 17 and through suitable openings in the pawls to sustain the same in proper operating position, while springs 31 and 32 respectively coöperate with the respective pawls 28 and 29 to force the same into engagement with the teeth of the wheels 15 and 16. The inwardly rounded face of each of the pawls between its pivot and its working edge is formed with an inturned lug 31'.

The operating member is provided with a longitudinally extending opening or passage 33 within which is arranged what I term a pawl control member 34. The member 34 comprises a substantially rectangular shank or body portion 35 which is snugly received within the passage 33, and which has its outer end offset providing the same with a finger 36. The shank 35 has formed thereon an enlargement 37, the outer wall 38 of which being arranged parallel with that of the shank proper, but the sides or end walls are inclined toward the said shank, as indicated by the numerals 39 and 40. The wall or face 38 is centrally formed with a notch 41, which is shaped to engage with the lug 31' of either of the pawls 28 or 29. When the member 34 is in the position illustrated in Fig. 1 of the drawings, the pawl 29 has been contacted by the enlarged portion 37 of the pawl control member 34 and its lug 31' is received within the depression 41 thereof, thus holding the pawl out of engagement with the ratchet wheel 16, leaving the second pawl 28 in engaging position with the ratchet wheel 15, and permitting the stock to be rotated in one direction, say in a right

handed direction. The engagement of the lug within the depression 41 sustains the said member 34 against movement. Should it be desired to permit both of the pawls to be arranged in contact with their respective ratchet wheels, the member 34 is moved upwardly, so that its enlargement 37 will be disposed between the said pawls. Should it be desired to throw the pawl 28 out of engagement to permit of the stock being rotated in a left hand direction, the member 34 is moved longitudinally until its angular face 39 will contact with the inner rounded face of the said pawl 28 and its outer straight wall 38 will force the pawl out of engagement with the said ratchet wheel to allow its lug 31' to be received within the depression 41 of the member 34.

From the above description taken in connection with the drawing, the detail of construction, as well as the operation of the device will, it is thought, be apparent to those skilled in the art to which such invention appertains without further detailed description.

Having thus described the invention, what I claim is:

In combination, a stock having one of its ends provided with a head and a second end formed with a socket, said stock having a pair of spaced toothed wheels, secured thereon, and said wheels having peripheral teeth of opposite pitch, a spherical operating member upon the stock and having depressions to receive the toothed wheels, spring pressed pawls carried by the operating member and engaging with the respective wheels of the stock, each of said pawls having its inner face provided with a lug, a pawl controlled member arranged within an opening in the operating member and having an offset end which extends through the operating member, said controlling member including a substantially rectangular body having one of its faces formed with an enlargement, the opposite end walls of which being beveled toward the shank and the outer face of said enlargement being provided with a notch, whereby the said operating member may be drawn over either of the pawls to bring the notch of the enlarged portion thereof in position to receive the lug of the pawl to sustain the pawl out of engagement with the toothed wheel and the operating member against movement.

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

RODNEY W. BALL.

Witnesses:

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