May 11, 1937. W. L. KAUFFMAN, 2D 2,080,047

PRESSURE ADJUSTING SCREW FOR WRINGERS

Filed Dec. 5, 1933

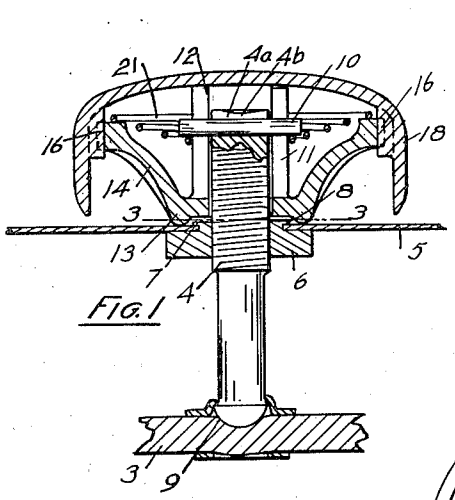


FIG. 1

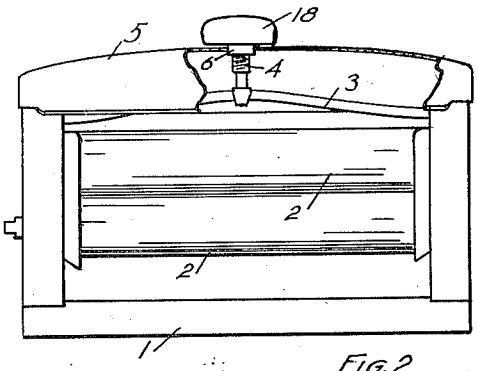


FIG. 2.

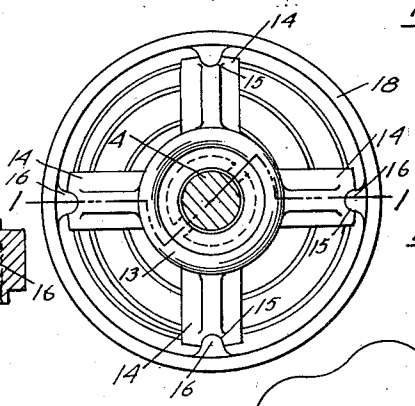


FIG. 3.

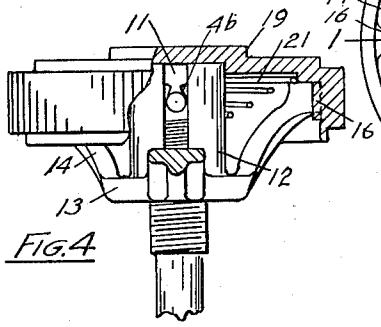


FIG. 4

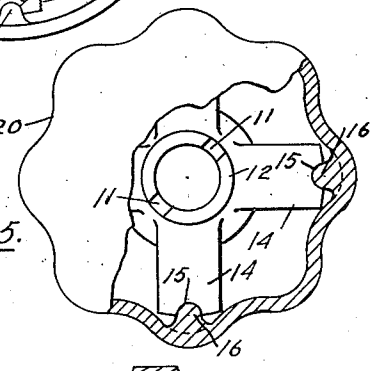


FIG. 5.

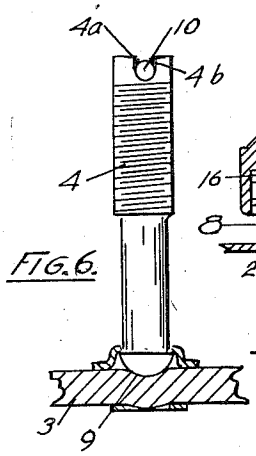


FIG. 6.

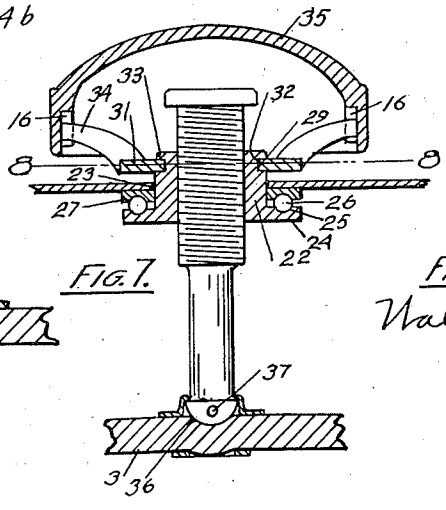


FIG. 7.

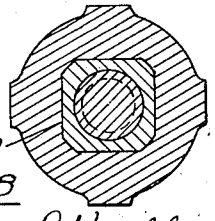


FIG. 8

Walter L. Kauffman II
INVENTOR.

BY T. Z. Lord
ATTORNEYS.

Patented May 11, 1937

2,080,047

UNITED STATES PATENT OFFICE

2,080,047

PRESSURE ADJUSTING SCREW FOR WRINGERS

Walter L. Kauffman, II, Erie, Pa., assignor to Lovell Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Application December 5, 1933, Serial No. 701,003

3 Claims. (Cl. 68—32)

Pressure adjusting screws for wringers as commonly made involve a variation in the position of the operating handle, or top of the screw with relation to the top bar and this is objectionable. The present invention is designed to so form a pressure adjusting screw device that the handle may remain in close proximity to the top bar as the screw device is operated. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing as follows:—

Fig. 1 shows a section on the line 1—1 in Fig. 3.

Fig. 2 an elevation of a wringer.

Fig. 3 a section on the line 3—3 in Fig. 1.

Fig. 4 a view partly in section showing an alternative form of handle.

Fig. 5 a view, partly in section, of the same structure.

Fig. 6 an elevation of the operating screw detached.

Fig. 7 a modification of screw device.

Fig. 8 a section on the line 8—8 in Fig. 7.

1 marks the wringer frame, 2 the rolls mounted in the frame, 3 the usual spring communicating pressure to the rolls, 4 a pressure adjusting screw of a pitch to be self-locking, and 5 a top bar in which the screw is arranged.

A nut 6 has a projection extending through an opening 7 in the top bar and the projection is headed down at 8 thus not only securing the nut, but locking it against turning in the top bar. The screw threaded part of the screw operates in the nut, and the lower end of the screw operates in a socket 9 attached to the spring. A pin 10 is arranged in a cross slot 4a in the upper part of the screw and it is secured in the slot by up-setting the walls of the slot at 4b. The pin extends through slots 11 in a sleeve 12. The sleeve 12 extends upwardly from a handle base 13. The handle base 13 is provided with arms 14. These arms have grooves 15 which engage lugs 16 in a peripheral wall of a handle 18. The engagement of the arms in the grooves locks the handle against turning relatively to the base 13 and through the lock afforded by the sleeve 12 and cross pin locks the handle rotatively with the screw.

In operation, as the handle is turned, the screw is rotated through the pin just described and the screw advances in the nut 6 and adjusts the pressure on the spring and rolls of the wringer. During this operation it will be noted that the handle is stationary in an axial direction and may maintain its position closely adjacent to the top bar, the cross pin 10 advancing down the slot as the screw is advanced. In as much as the operator ordinarily operates the handle intermittently the pressure on the cross pin is relieved between each forward impulse and consequently the friction incident to the advancing of the pin is avoided.

In the handle shown in Fig. 1, the outer periphery has a skirt which is brought down closely adjacent to the top bar and, therefore, houses the entire mechanism.

In Fig. 5 a modification of the shape of the handle is shown, the principal variation in the handle being the fluted peripheral wall 20 of the handle affording a more ready grip for the operation.

In order to give stability to the handle in its position and prevent rattling I prefer to provide a spring 21. The outer coil of this spring rests on the outer ends of the arms 14 and the inner coil of the spring is arranged under the cross pin 10. The spring tends to hold the handle down and exerts a sufficient pressure to maintain it in a comparatively fixed position.

In Fig. 7 I have shown a modification. In this modification a nut 22 is journaled in an opening 23. The nut is provided with a flange 24 in which there is a ball race 25. Balls 26 operate in the race and in an opposing race 27 secured under the top bar. The upper part of the nut 22 has a squared projection 29 and this squared projection extends through an opening 32 in a handle base 31 and is headed down at 33 so as to secure the nut in the handle base and lock it against turning. The handle base has arms 34 which are secured to the handle proper 35 in the same manner as in the preceding structure. The screw extends into a socket 36 attached to the spring and is locked against turning with relation to the spring by a pin 37. The screw is of the usual pitch and self-locking when adjusted.

In the operation of this modification, as the handle is turned, the screw is locked against rotation, but the nut is turned with the handle and consequently the screw is advanced, or retracted through the rotation of the handle. The handle remains stationary axially so that it may be maintained in close proximity, or in like adjustment with relation to the top bar.

What I claim as new is:—

1. In a wringer, the combination of a frame comprising a base, side stiles and a top bar; wringer rolls mounted in the side stiles; a screw

device mounted on the top bar, said screw device comprising a rotatable member and a non-rotatable member having co-operating screw threads, one member of the screw device extending through the top bar, the other member of said screw device being mounted on and held axially stationary relative to the top bar, means locking said non-rotatable member against rotation; means communicating pressure from said one member as it is actuated through the reaction of the said other member to the rolls; a handle connected and rotatively locked with the rotatable member; said handle being above the top bar and having means housing and concealing the portion of the screw device below the handle and above the top bar.

2. In a wringer, the combination of a frame comprising a base, side stiles and a top bar; wringer rolls mounted in the side stiles; a screw device mounted on the top bar, said screw device comprising a rotatable member and a non-rotatable member having co-operating screw threads, one of the members of the screw device extending through the top bar and the other member of the screw device being mounted on and held axially stationary relative to the top bar, and one of the members being in the form of a nut and the other in the form of a screw operating through screw action axially of the nut; means locking the non-rotatable member against rotation; means communicating pressure from the screw as it is actuated axially by the screw action of the nut to the rolls; a handle connected and rotatively locking with the rotatable member; and means supporting the handle normally axially stationary relatively to the top bar, said handle being above the top bar and having means housing and concealing the portion of the screw device between the handle and the top bar.

3. In a wringer, the combination of a frame comprising a base, side stiles and a top bar; wringer rolls mounted in the side stiles; a screw device mounted on the top bar, said screw device comprising a nut non-rotatably fixed on the top bar and a screw co-operating with the nut and movable axially through the screw action, said screw extending vertically through the top bar; a handle rotatively mounted above the top bar and connected and rotatively locked with the screw, means communicating pressure from the screw to the rolls, said handle having means housing and concealing the portion of the screw device below the handle and above the top bar; and a spring in the handle anchored on the screw and engaging the handle, said spring holding the handle in its position adjacent to the top bar.

WALTER L. KAUFFMAN, II.