Sept. 1, 1925. 1,551,804

T. DALTON

MOP

Filed May 29, 1924

Fig. 1.

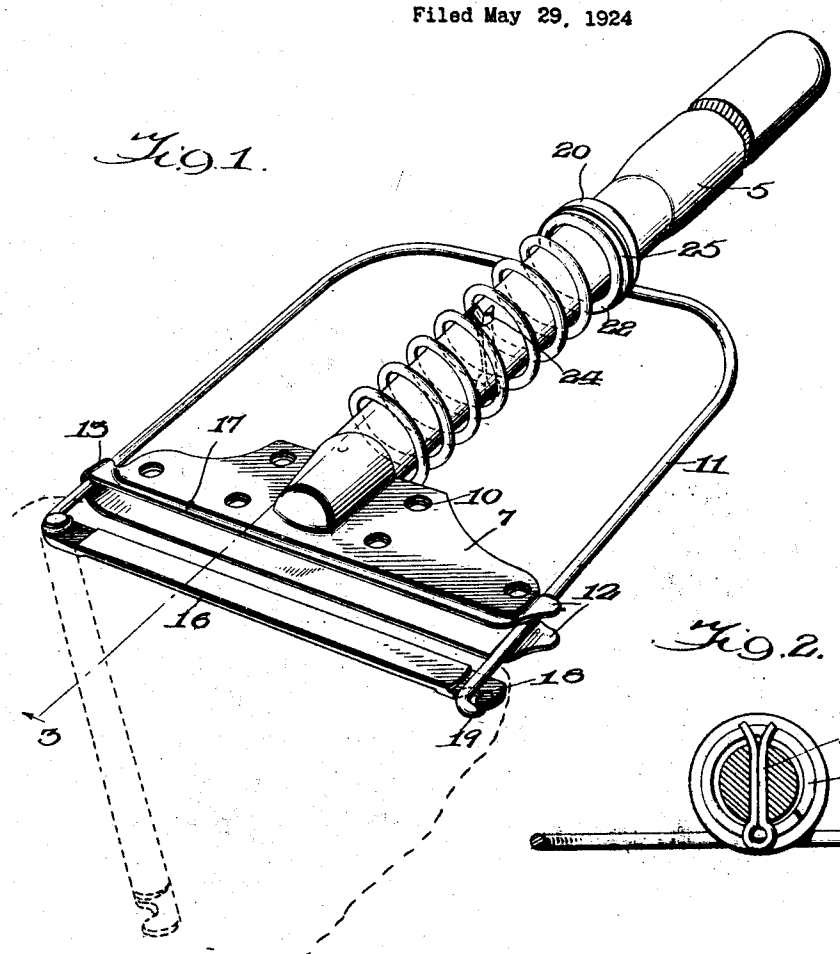


Fig. 2.

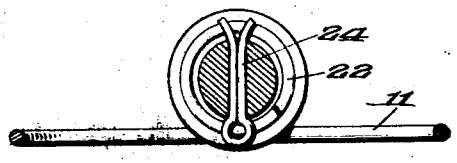
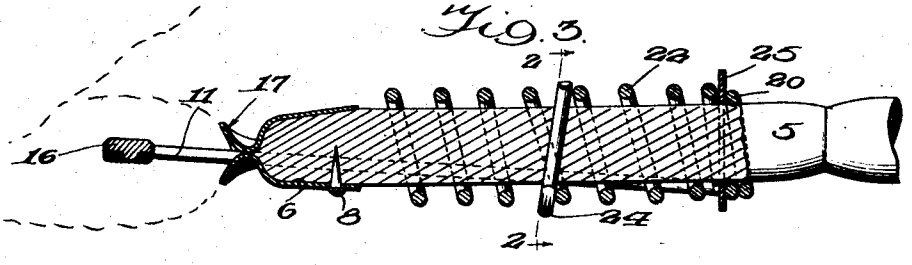


Fig. 3.



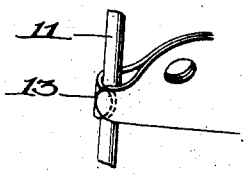


Fig. 4.

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UNITED STATES PATENT OFFICE.

THOMAS DALTON, OF CHICAGO, ILLINOIS.

MOP.

Application filed May 29, 1924. Serial No. 716,765.

To all whom it may concern:

Be it known that I, THOMAS DALTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Mops, of which the following is a specification.

This invention relates to mops and more particularly to the means for connecting the cleaning element to the handle.

An important object of this invention is to provide a mop having novel means whereby the spring pressure for holding the cleaning element in place may be varied for operation under a variety of conditions.

A further and equally important object of this invention is to provide a mop having means whereby the spring pressure on the yoke of the mop may be entirely relieved to permit of the convenient disconnection or attachment of the cleaning element.

A further object is to provide a mop of the character specified which is of highly simplified construction, durable in use and cheap to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawing forming a part of this application and in which like numerals are employed to designate like parts throughout the same.

Figure 1 is a perspective of the improved mop;

Figure 2 is a vertical transverse sectional view through the same;

Figure 3 is a detail longitudinal sectional view through the improved mop;

Figure 4 is a fragmentary perspective illustrating the means to slidably connect one side of the U-shaped yoke to the head.

In the drawing wherein for the purpose of illustration is shown a preferred embodiment of the invention the numeral 5 designates a handle of any desired length and having its forward end extended into a socket 6 intermediate the ends of a head 7. Figures 1 and 3 plainly illustrate that the head is formed from two pieces of flat metal having their intermediate portions bent outwardly in opposite directions to define the socket 6. The handle may be secured in the socket by a fastening device 8 of any suitable type.

In carrying out the invention one of the two pieces of material which forms the head 7 is punched through the other piece of material at a plurality of points as indicated at 10 and this securely unites the two pieces of material to form a rigid head.

As illustrated in Figure 1 a yoke 11 is associated with the head 7 and is provided with spaced parallel sides slidable between ears 12 and 13 formed at the ends of the head and the ears 13 are bent into overlapping relation with each other to permanently though slidably secure the yoke to the head. However, the ears 12 are positioned in spaced relation to each other to define a groove for the reception of the adjacent side of the yoke. Thus it will be seen that one side of the yoke may be disconnected from the head to facilitate the attachment of the cleaning element or to facilitate the disconnection of the same from the mop. This construction also facilitates the original assembly of the device.

One side of the yoke pivotally carries a clamping bar 16 adapted to be directly engaged with the cleaning element so as to lock the cleaning element in engagement with the forward end of the head. The two pieces of material which constitute the head 7 have their forward edges bent outwardly to define flanges 17 between which the clamping bar 16 may be positioned and by reason of this construction the cleaning element is securely and positively clamped. Of course the ends of the clamping bar 16 are slightly offset to position the clamping bar directly in line with the head 7 as illustrated in Figure 3.

One end of the clamping bar 16 is formed with a notch 18 adapted to receive the hooked end 19 of one side of the yoke and of course when the hooked end 19 is received in the notch 18 the clamping bar 16 is engaged with the cleaning element.

The bight portion of the yoke 11 is formed with a loop 20 forming a stop or an abutment for one end of a suitably stout coil spring 22. The coils of the spring are all wrapped about the handle 5 and a pin or key 24 is extended through the handle on a bias to form the forward abutment for the coil spring. Therefore the spring exerts a rearward pressure on the yoke so that the cleaning element may be secured in position. By turning the spring 22 in the proper direction it may be moved forwardly or rearwardly with respect to the stop element 24 and thus the tension

of the spring may be varied. In other words, the spring 22 may be advanced or retracted in exactly the same manner as a nut is advanced or retracted on a bolt and the only part of the spring which is effective is located between the stop 24 and the loop 20. Of course the spring 22 is sufficiently greater in internal diameter than the handle to permit of the free turning of the spring in either direction. When the major portion of the spring is confined between the stop pin 24 and the loop 20 the tension on the yoke is substantially increased. A suitable washer 25 may be confined between the rear end of the coil spring and the loop and it might be added that the rear end of the spring is ground away to provide a substantially flat bearing surface for the loop 20.

In operation when it is desired to attach a cleaning element to the loop it is first desirable to advance the coil spring 22 with respect to the stop pin 24 so that it will be in an entirely neutral position. The spring tension on the yoke 11 is therefore relieved and the yoke may be advanced the desired extent so that the bar 16 can be disconnected from the hook 19. The clamping bar is now engaged by the cleaning element and the bar is again connected with the hook whereupon the spring 22 is returned to its operative position. As the spring 22 is retracted or turned rearwardly to its operative position the tension on the yoke is gradually increased and the cleaning element is therefore tightly engaged. This operation may be reversed when it is desired to disconnect the cleaning element.

Particular attention is directed to the fact that the parts are unusually sturdy and may be operated by any one with but a small effort. Very little strength is required to turn the coil spring 22 in either direction and regardless of the position of the coil spring it is not likely to get entangled in the cleaning element.

The clamping bar 16 may be provided with a longitudinally extending rib by means of which the bar is substantially strengthened and reinforced. Also, while a pin or key 24 has been shown, any equivalent device may be employed that will serve the same purpose.

Having thus described the invention what is claimed is:

1. A mop comprising a handle, a head secured to the handle and having pairs of guide ears, a yoke having spaced sides slidable between said ears and having a bight portion provided with a loop slidable on said handle, a stop member extending obliquely through said handle between said loop and said head, and a rotatable coil spring separate from said yoke mounted on said handle between said loop and said head and having one of its convolutions engaged by opposite ends of said stop member whereby the stop element forms a forward abutment for the coil spring.

2. A mop comprising a handle, a head secured to the handle and having pairs of guide ears, a yoke having spaced sides slidable between said ears and having a bight portion provided with a loop slidable on said handle, a stop member extending through said handle between said loop and said head, and a rotatable coil spring separate from said yoke mounted on said handle between said loop and said head and having one of its convolutions engaged by said stop member whereby the stop element forms a forward abutment for the coil spring, said coil spring being adjustable with respect to said stop member.

In testimony whereof I affix my signature.

THOMAS DALTON.