

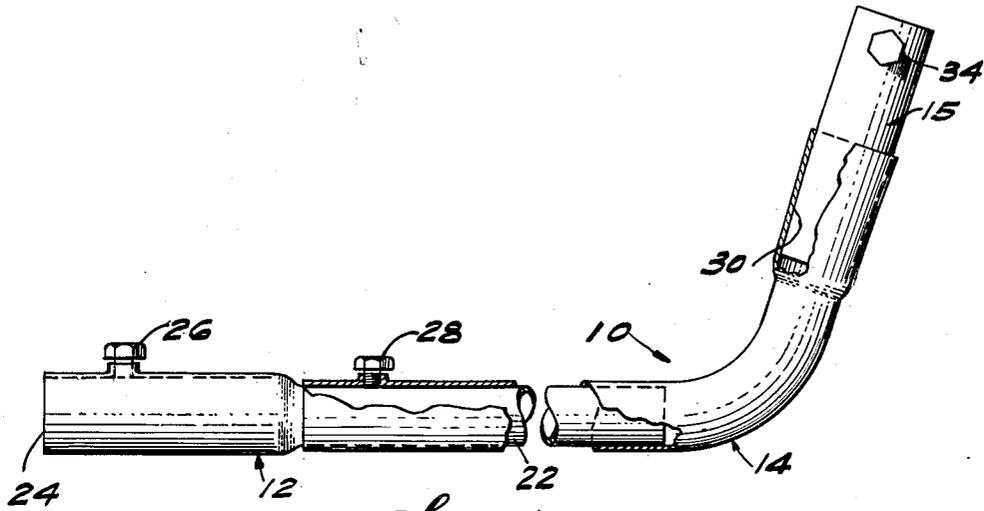
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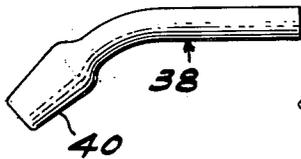
2,624,061

ANGULAR ADAPTER FOR CLEANING TOOLS

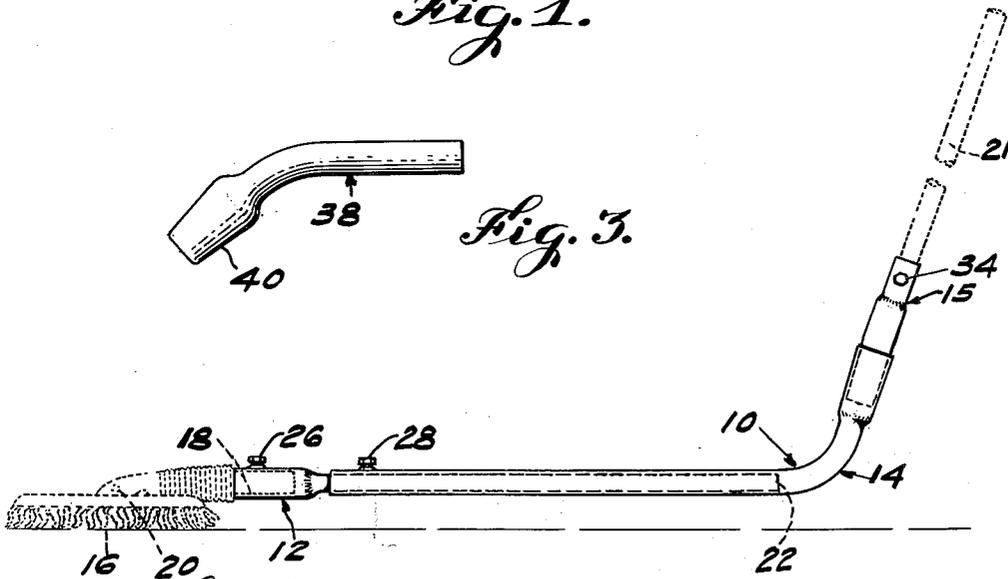
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*Fig. 1.*



*Fig. 3.*



*Fig. 2.*

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# UNITED STATES PATENT OFFICE

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## ANGULAR ADAPTER FOR CLEANING TOOLS

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4 Claims. (Cl. 15—144)

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My invention relates to an adapter device designed to enable cleaning tools such as mops and carpet sweepers to be used to clean places which are awkward to reach, for instance under beds and bureaus or the tops of built out clothes closets and tall bookcases.

In cleaning such areas either the furniture must be moved, which is often impracticable, or the housewife must bend down or crouch to get the handle of the dust mop or other cleaning tool horizontal, or to clean the tops of high pieces of furniture must stand on a stepladder or chair.

Such attitudes are tiring and in the case of elderly people may be dangerous, since they may lead to falls and serious injury.

It is the purpose of my invention to provide adapter means whereby a variety of cleaning tools may be modified very simply and used in combination with the adapter to clean ordinarily inaccessible areas without requiring the user to crouch or use a stepladder.

It is a further purpose of my invention to provide adapter means constructed to enable wooden handled cleaning tools, such as mops and the like, to be used to greater advantage than when in their usual form, and which may also be used to increase the usefulness of vacuum cleaners.

A still further object of my invention is to provide an adapter by means of which areas spaced away from the operator either at floor level or above his head may be cleaned without the operator changing a comfortably erect position on the floor.

Yet another object of my invention is to provide an adapter by which mops and the like may be used under furniture or on the top of bookcases and other high pieces as effectively as if the operator were to directly hold the cleaning tool by the avoidance of any yielding in the adapter and various fittings incorporated therewith.

Still further features and objects of my invention will hereinafter appear from the following specification taken in conjunction with the accompanying drawing in which is illustrated embodiments of the invention at present deemed preferably by me, but it is to be understood that various changes, modifications, and arrangements of parts may be made by those skilled in the art without departing from the scope of the invention as intended to be defined by the appended claims.

In the accompanying drawing—

Fig. 1 is a side elevation showing the adapter of my invention in assembled relation, with parts broken away to show nested elements;

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Fig. 2 is a side elevation drawn on a smaller scale showing a mop and the sawed-off mop handle mounted on the adapter; and

Fig. 3 is a side elevation of a fitting for use with vacuum cleaners and their attachments to increase the ease of use thereof under certain conditions.

In the drawings the numeral 10 indicates generally the adapter of my invention. The adapter comprises at least the three parts or portions 12, 14 and 15 of which part 14 is considered the principal element of the connecting means, but preferably other co-operating parts may be combined therewith as later described and their use explained.

The use of the adapter will be described as applied to a mop, but it will be evident that other cleaning tools may be used therewith as will later appear.

The mop 16 is of a conventional type in which the head of the mop is connected to the end of the mop handle 18 by a pivotal joint 20 so that the mop head will be capable of lying flat on a floor although the handle is held at various inclinations. The mop handle is usually about four feet long and when the adapter is to be combined therewith is sawn in two leaving the handle next to the head about three inches long.

The adapter is tubular and, speaking generally, the short end 18 of the handle is inserted into and gripped in the free end of the adapter part 12, while the longer sawed-off end 21 of the handle is inserted into and gripped in the free end of the adapter part 15.

Since the width of pieces of furniture under which it is desired to clean may vary widely, I prefer to provide the inner end of the adapter part 12 with a telescopic extension 22, the outer end of extension 22 being formed with a socketted portion 24 to receive the mop handle stub 18 which may be secured therein by any suitable means, shown conventionally as a stud 26 screwing into a threaded hole in the pressed-out wall of the socket.

The inner end of extension 22 is of a diameter such that it fits snugly into the main portion 14 of the adapter and is held in adjusted position by suitable means such as stud 28 arranged similarly to stud 26.

Although the longer portion of the handle of the mop may be directly mounted in the upper end of the adapter and secured therein, I prefer to provide a joint and socket arrangement which affords various advantages.

The upper end of the adapter part 14 is therefore provided with a socketted portion 30 which

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is slightly tapered or flared outwardly, and the handle receiving member 15 is provided having the lower end shaped to tightly fit the socket 30 and to receive in the opposite end the main portion of the mop handle 21 which is secured therein by the threaded stud 34 arranged similarly to studs 26 and 28. Through the medium of the part 15 it will not be necessary to operate a screw each time the handle is detached or applied to the part 14. When the handle 21 is detached the device may be placed on a shelf when not in use.

The mop head may also be used with extension piece 22 serving as a handle as for instance to dust off walls, curtains and the like, without using other portions of the adapter.

The fitting 38 shown in Fig. 3 enables the adapter of my invention to be used with vacuum cleaners. Fitting 38 comprises a length of tube of the same diameter as the socketted portion for the extension 22 but at one end is formed with a tapered socket 40, shaped so that it may be press-fitted into the tapered sockets provided on the attachments of some popular vacuum cleaners. The suction hose or tube of such vacuum cleaners is provided with a tapered joint similar to that provided on joint 14 and may be plugged into socket 30. Thus all the fittings of such vacuum cleaners may be used with the adapter of my invention to clean areas under furniture which could not be reached otherwise or could only be reached with difficulty, as well as the tops of high pieces of furniture.

It will be noted that surfaces on top of bookcases, built out cabinets and the like may be cleaned by holding the handle of the mop or suction tube of a vacuum cleaner, if desired, vertically, the cleaning tool mop or other device, being faced in the opposite direction to that shown in Fig. 2, by loosening stud 26 and rotating mop 16 through an angle of 180 degrees.

It will be seen that in any combination of parts used with my adapter, a rigid handle is provided on which the tool is mounted and by which it is operated, so that the force exerted by the person using the device is transmitted directly and entirely to the cleaning tool which may be used to clean areas, while the user maintains a comfortably erect position on the floor which would otherwise be inaccessible to him.

I claim:

1. In a cleaning tool, a tubular adapter having a long straight length approximately half the width of a bed at one end and a short bent up length at the opposite end, said long straight length being securable to a cleaning implement having an extension secured to it telescoped into said long straight length compensating for the other half bed width so that in the mounted condition of the cleaning implement said long straight length together with the extension of the cleaning implement carried thereby during manual operation may be positioned to assume a horizontal relation to the floor area being cleaned beneath the bed, and said short bent up length being provided with socket means where to secure a handle means whereby the cleaning tool

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may be manually operated by the user in a horizontal manner to clean floor areas underneath the bed which would otherwise be inaccessible to him while maintaining a comfortably erect position on the floor without stooping, and means carried by said long length for effecting the connection with the cleaning implement aforesaid.

2. Connecting means adapted for having extensibly connected therewith at one end the stub end of a cleaning implement and at the opposite end a handle which has been severed from said stub end, said connecting means comprising a tubular, horizontally extending portion of considerable length having a short length extending upwardly at an angle to said horizontally extending portion, the stub end of said cleaning implement, when operatively connected to the outer end of said horizontally extending portion together with the extensibly mounted cleaning implement carried thereby when extended, being manually operable so that while in its normal operative position such assembly may be caused to assume a horizontal relationship with the full width floor area under a bed, in such position said short length of the connecting means extending upwardly together with the handle carried thereby, so that in the entire assemblage of the parts the user may clean areas otherwise inaccessible to him while maintaining a comfortably erect position on a floor without stooping.

3. Connecting means comprising a tubular adapter having a long straight length provided with a short upwardly extending socketted portion at one end for the insertion of a handle means thereinto, a tubular extension of considerable length telescoped into the other end of said tubular adapter and provided with a socketted portion on the protruding end for having connected therewith the butt end of the cleaning implement severed from said handle, and means for extensibly securing said extension in said adapter.

4. The subject matter of claim 3 and the summation of the lengths of said long straight length and said tubular extension approximating the width of a bed.

EARL LEAS.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

Number	Name	Date
577,220	Whittehead	Feb. 16, 1897
612,685	Thorp et al.	Oct. 18, 1898
855,600	Warren	June 4, 1907
981,705	Spencer	Jan. 17, 1911
1,086,367	Hope	Feb. 10, 1914
1,115,989	Thurman	Nov. 3, 1914
1,175,402	Baylis	Mar. 14, 1916
1,333,741	Thomas	Mar. 16, 1920
1,838,448	Pomfret	Dec. 29, 1931
2,232,824	Maher	Feb. 25, 1941
2,245,151	Martinet	June 10, 1941
2,503,738	Horton	Apr. 11, 1950