

(No Model.)

A. R. KNAPP.
BRUSH.

No. 576,200.

Patented Feb. 2, 1897.

Fig. 1.

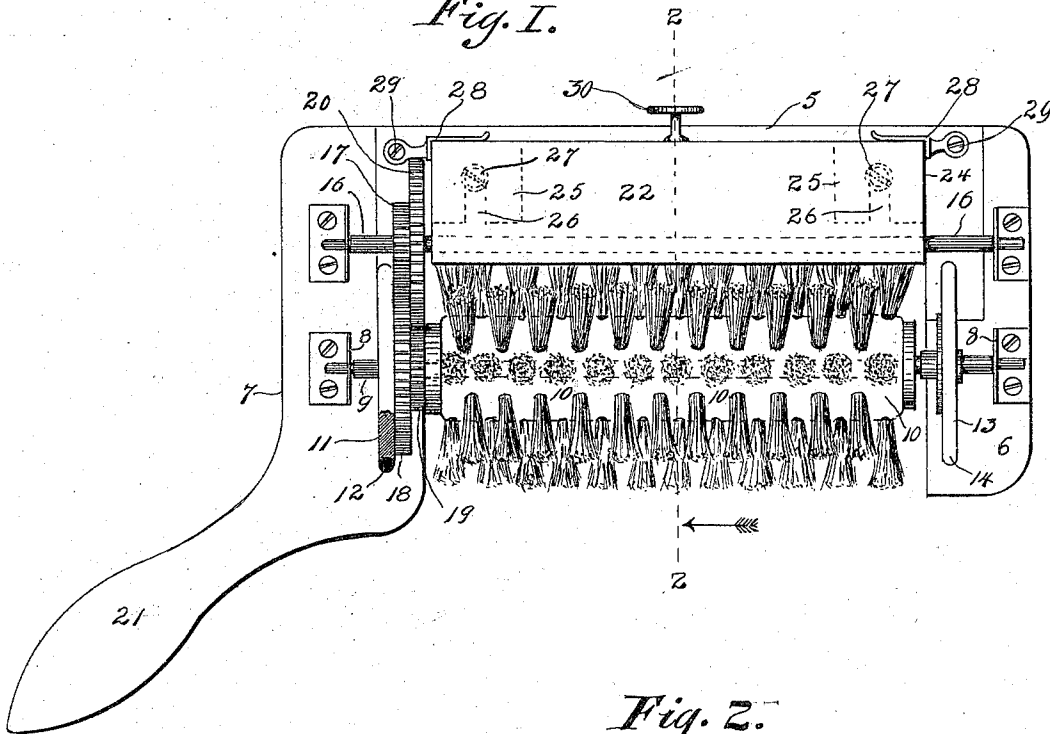
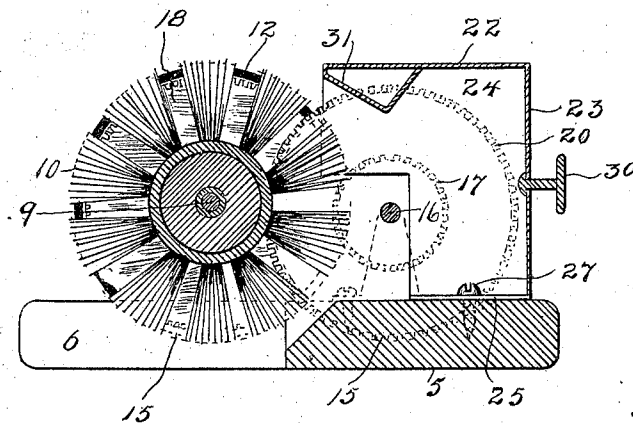


Fig. 2.



WITNESSES
Charles H. Hagan
Edgar
3

INVENTOR
Alfred R. Knapp
BY
Edgar Sale Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALFRED ROBERT KNAPP, OF CREWKERNE, ENGLAND.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 576,200, dated February 2, 1897.

Application filed June 11, 1896. Serial No. 595,131. (No model.)

To all whom it may concern:

Be it known that I, ALFRED ROBERT KNAPP, a citizen of Great Britain, and a resident of Crewkerne, in the county of Somerset, England, have invented certain new and useful Improvements in Crumb-Brushes, Carpet-Sweepers, &c., of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts.

This invention relates to crumb-brushes, carpet-sweepers, and similar devices; and the object thereof is to provide an improved device of this class which is simple in construction and operation, and by means of which a table may be quickly and easily cleaned, a carpet swept, and other similar operations performed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a bottom plan view of my improvement, and Fig. 2 a section on the line 2 2 thereof.

In the practice of my invention I provide a top plate 5, having end pieces or projections 6 and 7. Secured to the projections 6 and 7 are hangers 8, in which a shaft 9 is mounted, said shaft being provided with a central broom or brush head 10, which is revolvably mounted thereon, and at one end thereof with a wheel 11, which is provided with a rubber tire 12, and at the opposite end with a similar wheel 13, which is also provided with a rubber tire 14. The projections or extensions 7 of the back plate 5 are provided with segmental grooves 15, as shown in dotted lines in Fig. 2, through which said wheels pass, and said wheels 11 and 13 are rigidly secured to the shaft 9.

Mounted at the rear of the shaft 9 is a similar shaft 16, which is provided with a pinion or small gear-wheel 17, which is rigidly secured thereto and which operates in connection with a large gear-wheel 18, rigidly secured to the wheel 11, and secured to the pinion or small gear-wheel 17 is a large gear-wheel 20, which operates in connection with a pinion or small gear-wheel 19, rigidly secured to the brush or broom head and revolvable therewith.

In operation the device is held by the handle 21, and the wheels 11 and 13 are pressed on the table-cloth or table, or on the carpet or other surface to be cleaned, and the device is pulled thereover, in which operation the shaft 9 is revolved by the wheels 11 and 13, the shaft 16 by the gear-wheel 18, and the brush or broom head by the gear-wheel 20, which operates in connection with the pinion 19, which is secured thereto, and this operation will result in revolving the brush or broom head much more rapidly than the shaft 9, on which it is mounted, is revolved, the speed with which said brush or broom head is revolved depending upon the size of the gear-wheels by which it is operated. I also provide a detachable receptacle for the dust, crumbs, and other articles which is oblong in form and which consists of a bottom plate 22, a back plate 23, and ends 24. This receptacle is also provided at each end with inwardly-directed projections 25, one of which is shown in full lines in Fig. 2, and both being shown in dotted lines in Fig. 1, and said projections are provided with forwardly-directed slots 26, which are shown in dotted lines in Fig. 1, and in securing the receptacle in place the top thereof is placed upon the bottom of the top plate 5 and said receptacle is shoved forward in such manner that screws 27 enter the slots 26 and hold the detachable receptacle in place, and I may, if desirable, also provide pivoted spring-catches or similar devices 28, which are pivotally connected with the bottom of the top plate at 29 and which are adapted to be swung into position, so as to assist in holding the detachable receptacle in place, as shown in Fig. 1, and said receptacle is provided centrally of its back with a knob or handle 30, and longitudinally of the top plate thereof is a downwardly and backwardly directed flange or plate 31, which serves to retain the crumbs and other articles therein.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof. In order to clean off a table-cloth, carpet, or similar article, the device is grasped by the handle 21, and the wheels 11 and 13 are pressed upon the surface to be cleaned, and said de-

vice is pulled across said surface, this operation resulting in rapidly revolving the brush or broom head, and the crumbs, dust, or other articles are picked up by said brush or broom head and thrown backwardly into the detachable receptacle at the rear thereof, and the inclined plate or flange 31 serves to hold said crumbs, dust, and other articles within said receptacle.

10 Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A crumb-brush, carpet-sweeper or similar article, consisting of a suitable top plate 15 having forwardly-directed projections at each end, a handle connected with one of said projections, said projections being also provided on their under side with a shaft which is mounted in hangers connected therewith, and 20 on which is mounted a brush or broom head, and said shaft being also provided at each end with wheels which are adapted to be pressed upon the surface to be cleaned, and by which the shaft is revolved, and said device being also provided rearwardly of the 25 brush or broom head with a detachable receptacle which is open at the front, and into which the crumbs, dust and other articles are adapted to be swept, and said device being 30 also provided beneath the top plate with another shaft which is mounted in hangers connected therewith, one end of which is provided with a pinion which operates in connection with a large gear-wheel, which is secured to one of the wheels on the shaft of the 35 brush or broom head, said pinion being also

provided with a large gear-wheel which operates in connection with a pinion secured to the end of the brush or broom head, and by which the brush or broom head is revolved, 40 much more rapidly than the shaft on which it is mounted, substantially as shown and described.

2. A broom or brush for cleaning table-cloths, carpets and the like, consisting of a 45 top plate 5, and having end pieces or projections 6 and 7, one of said projections being extended to form a handle, hangers 8 secured to said projection, shaft 9, mounted in the forward hangers, a brush or broom head 10, 50 revolubly mounted on said shaft, a wheel 11, mounted on one end of said shaft and provided with rubber tires, a similar wheel 13, mounted at the opposite end thereof, said projections being provided with segmental 55 grooves 15 through which said wheels pass, a shaft 16 mounted in the rear of the shaft 9, and provided with a pinion 17, which operates in connection with a gear-wheel 18, connected to the wheel 11, and a large wheel 20, 60 secured to the pinion 17, and adapted to operate in connection with a pinion 19 carried by the brush, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 28th 65 day of May, 1896.

ALFRED ROBERT KNAPP.

Witnesses:

FRED GEO. ELLIOTT,
EDWARD NEWTON.