

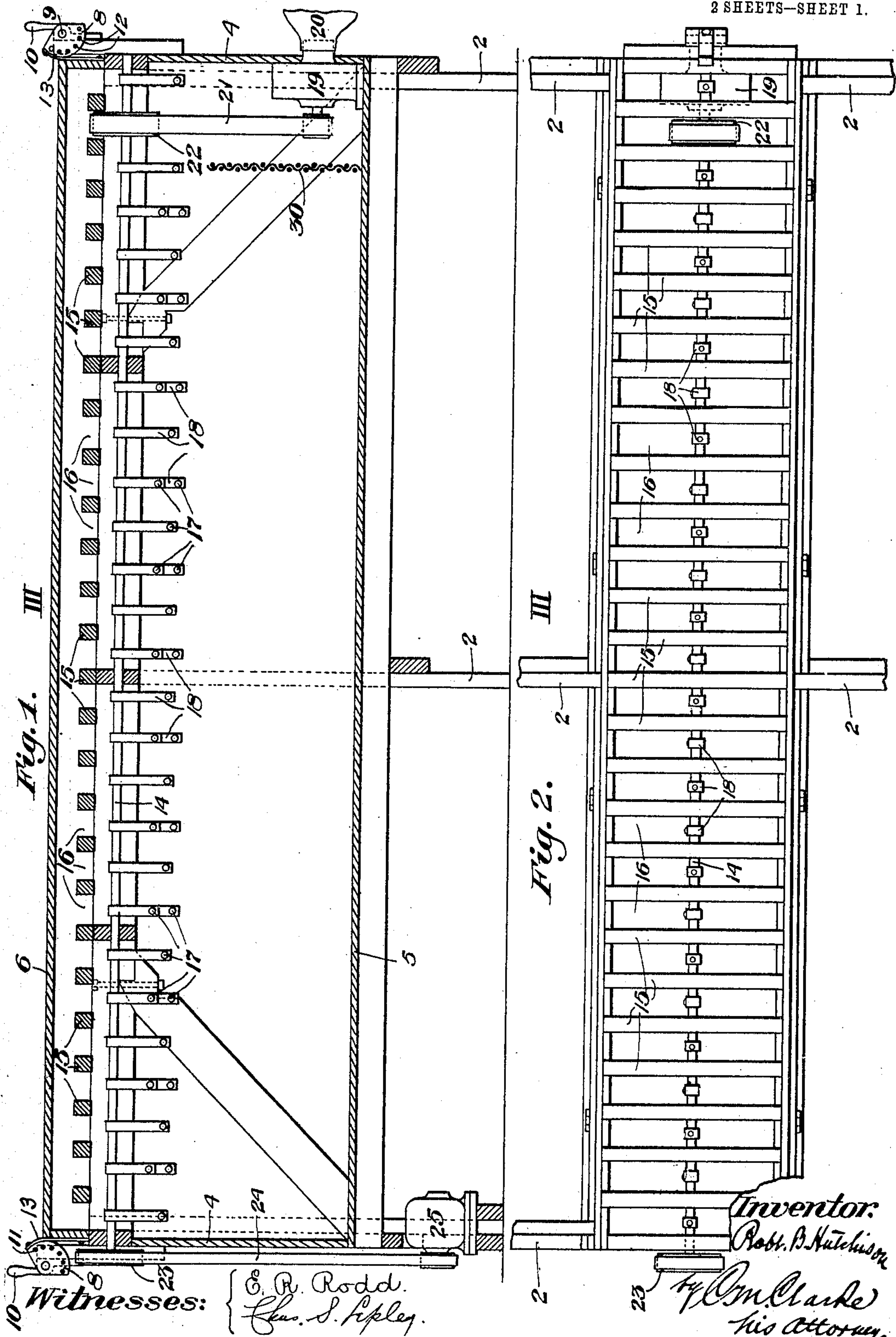
No. 871,700.

PATENTED NOV. 19, 1907.

R. B. HUTCHISON.  
CARPET CLEANING MACHINE.

APPLICATION FILED NOV. 22, 1905.

2 SHEETS—SHEET 1.



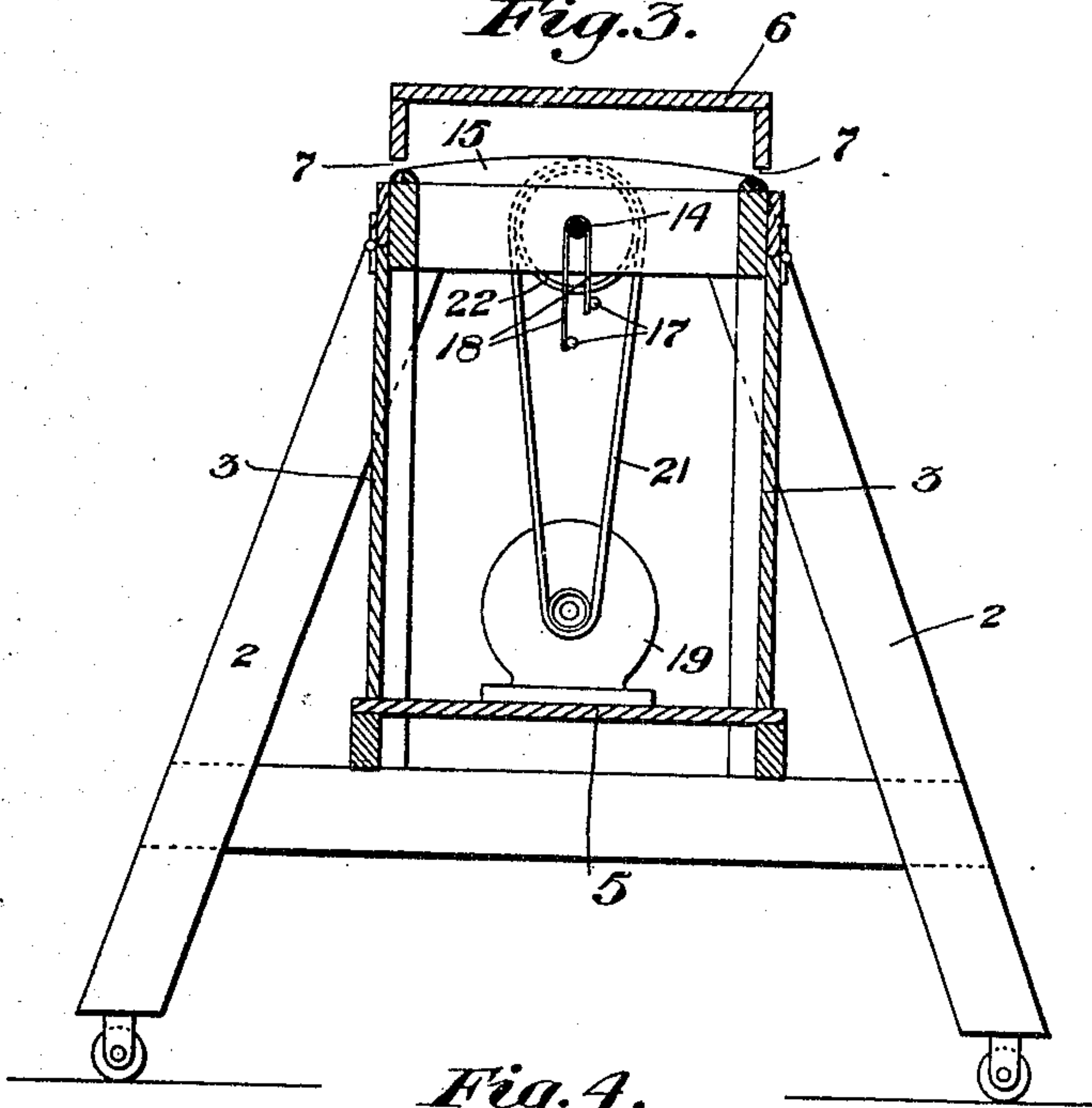
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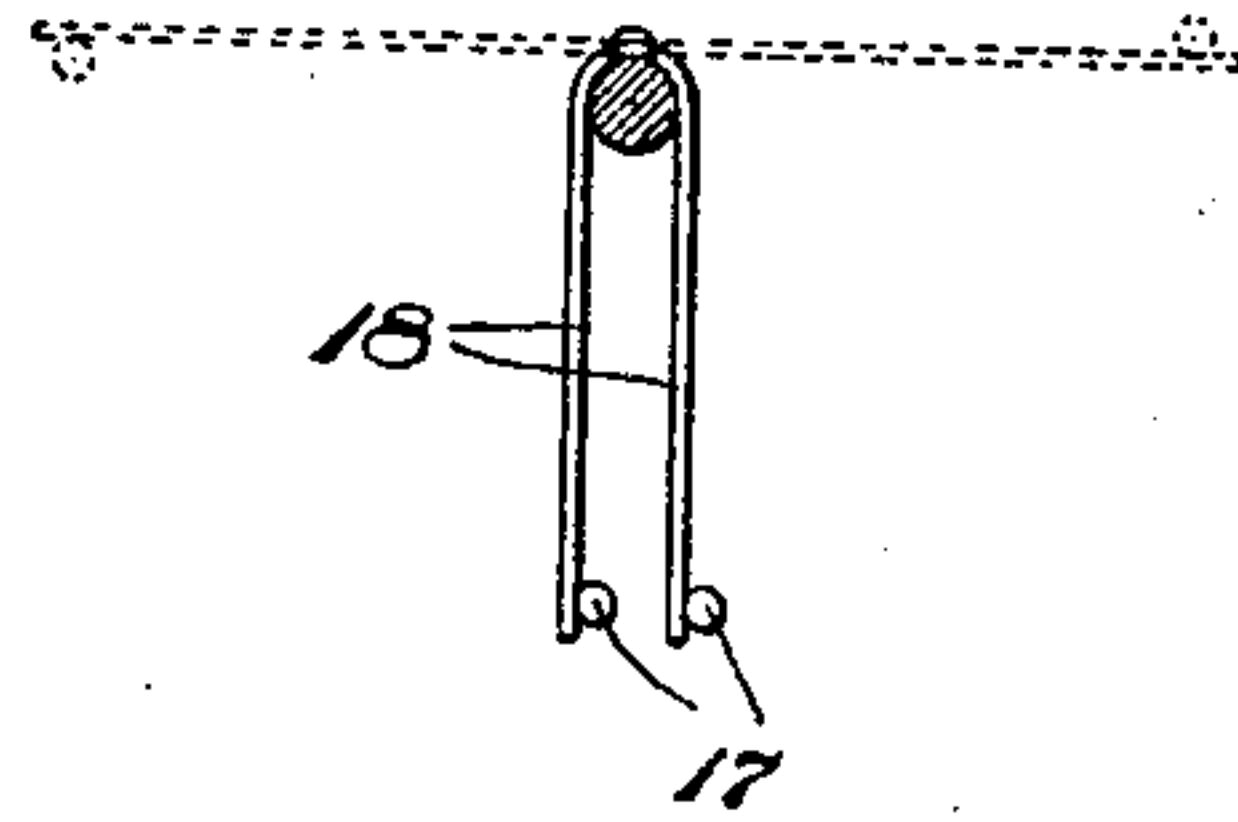
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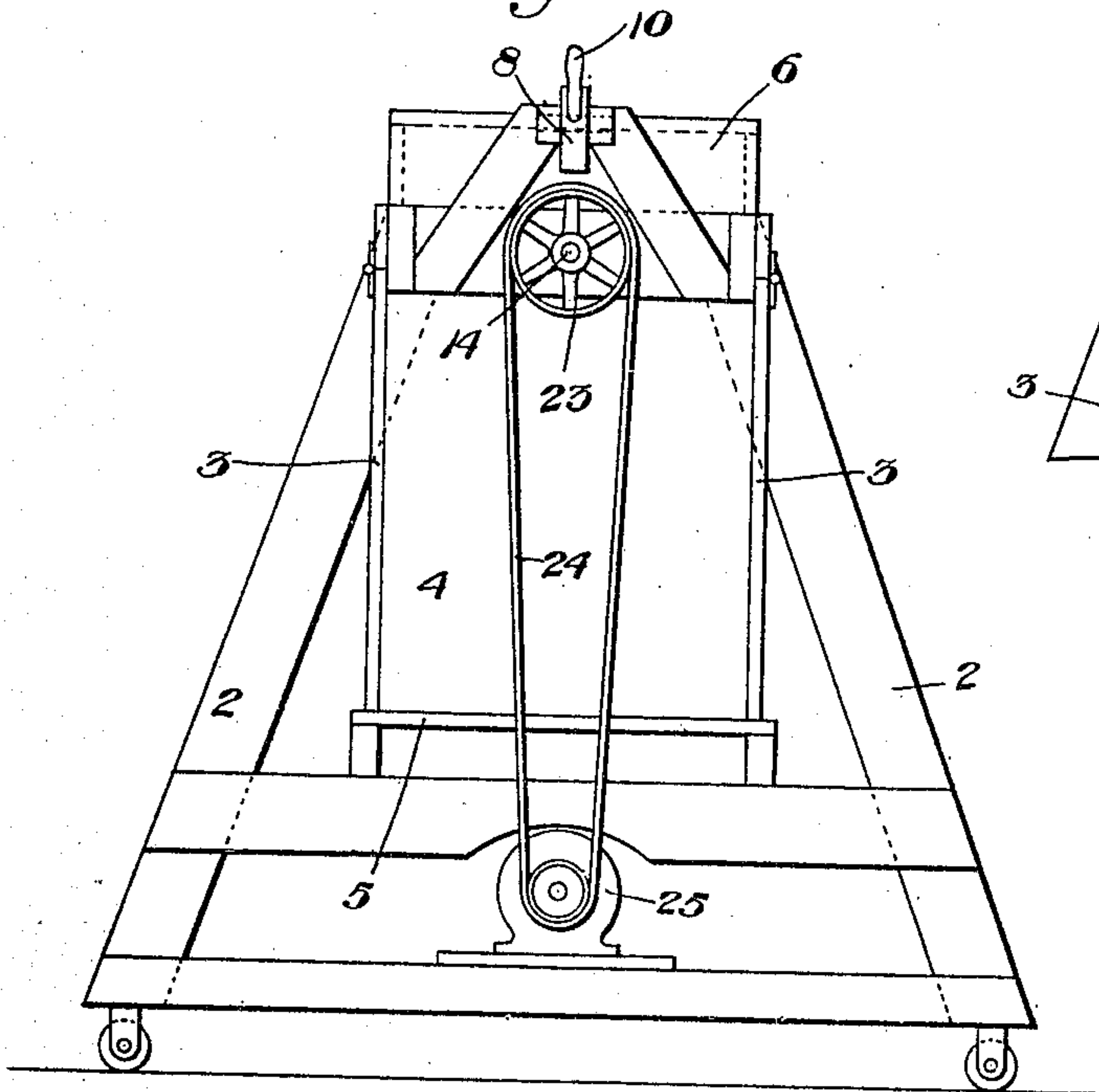
*Fig. 3.*



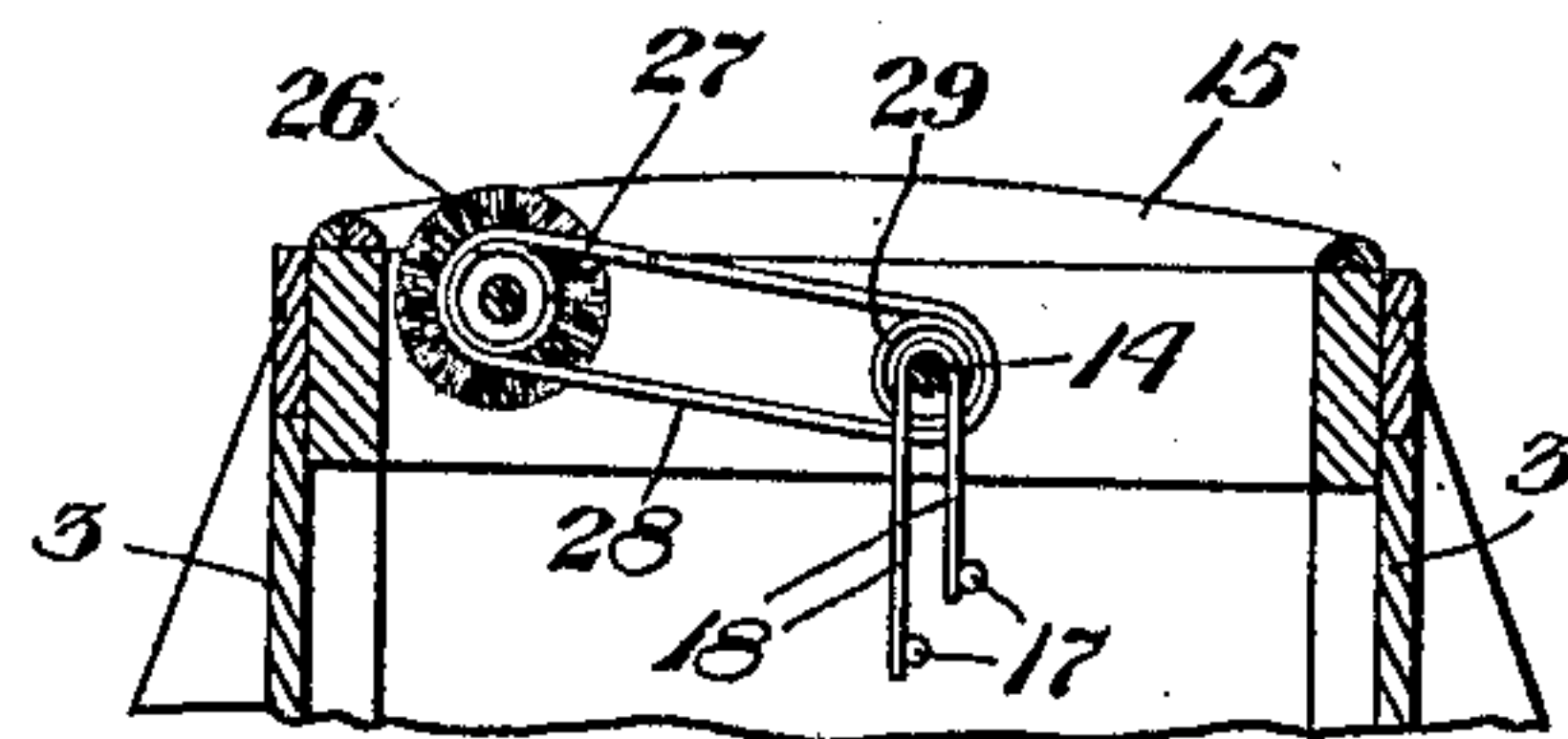
*Fig. 5.*



*Fig. 4.*



*Fig. 6.*



*Witnesses:*

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Chas. S. Sibley.

*Inventor:*

Robt. B. Hutchison  
by C. M. Clarke  
his attorney.



# UNITED STATES PATENT OFFICE.

ROBERT B. HUTCHISON, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO  
ALFRED H. THURSTON, OF NEW YORK, N. Y.

## CARPET-CLEANING MACHINE.

No. 871,700.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed November 22, 1905. Serial No. 288,571.

*To all whom it may concern:*

Be it known that I, ROBERT B. HUTCHISON, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Carpet-Cleaning Machines, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of the specification, in which—

Figure 1. is a longitudinal vertical sectional view of my improved carpet cleaning apparatus. Fig. 2. is a plan view of Fig. 1. Fig. 3. is a vertical cross sectional view on the line III. III. of Fig. 1. Fig. 4. is an end elevation of the machine. Fig. 5. is a detail view showing the construction of the beater shaft and beaters. Fig. 6. is a similar view showing an additional cleaning brush.

My invention refers to improvements in apparatus for cleaning carpets or rugs and comprises a casing having an entering and an exit slot at opposite sides for the article to be cleaned, said casing inclosing a beating device provided with a plurality of flexibly connected beaters adapted to be brought into continuous rapid contact with the rug as it is drawn through the case, together with means for discharging the loosened particles of dirt, dust, etc., means for driving the apparatus, means for adjusting the top or cover portion, and various other features of construction as shall be more fully hereinafter described.

Referring now to the drawings, 2 represents the supporting framework of the apparatus designed in any suitable manner and embodying a longitudinal inclosing chamber of the desired length for the articles to be cleaned inclosed within side walls 3, 3, preferably hinged to permit of the chamber being opened, end walls 4, 4, a bottom or floor portion 5, and a top or cover 6, which top or cover is preferably adjustable. Between the upper side edges of the casing and the lower side edges of the cover 6 is an intervening slot opening 7 provided at each side by raising the cover to the desired height. These openings 7 are of sufficient width to allow of the passage therethrough, in and out of the machine, of the rug or carpet being cleaned, and extend along the machine at each side. The casing 6 may be raised and lowered for such purpose by means of any suitable suspending mechanism, as sectors 8 pivoted at

9 provided with a crank handle 10, said sectors being capable of being set at varying positions by means of pins 11 inserted through one of a series of holes 12 and provided with supporting straps 13 connected with the cover, by which it may be conveniently raised, as will be readily understood and then lowered.

Mounted in suitable bearings longitudinally of the casing at its upper portion is a shaft 14, above which shaft are a series of cross slats or supporting bars 15 upon the curved upper faces of which the rug may rest, with intervening clearance openings 16 through which the beaters may pass to come into operative contact. Shaft 14 is provided with a series of flexibly connected beaters consisting of weighted buttons 17 secured at the ends of the flexible straps 18 attached to the shaft at intervals, as clearly shown in Fig. 5, said straps being preferably double *i. e.* having a button at each end as shown, the straps being preferably arranged in staggered relation around the shaft.

19 is a centrifugal fan or blower adapted to discharge the loosened dust, etc. outwardly from the case into a receiving bag 20 or to any suitable point of discharge, said blower being driven by its pulley through belt 21 geared from pulley 22 mounted on shaft 14 at one end of the machine. The other end of shaft 14 is provided with a pulley 23 geared through belt 24 from the driving pulley of an electric motor 25 or other suitable prime mover located upon or incorporated with the main framework of the apparatus.

For the purpose of arresting lint, strings or portions of the fabric liable to become entangled with the fan as carried thereinto by the air, I employ a screen 30 of wire netting located across the area of the inclosing chamber at one end, adjacent to the fan.

In Fig. 6 I show a modified detail view providing a supplemental rotating brush 26 geared by pulley 27 and belt 28 from a driving pulley 29 mounted on shaft 14, the object of which construction is to more thoroughly cleanse the rug by removing any adhering particles.

The construction and operation of the invention will be readily understood from the foregoing description.

The beaters are caused to come into contact with the under side of the rug very rap-

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idly depending on the speed of the driving shaft 14, which may be varied if desired, and will very thoroughly agitate the fabric so as to thoroughly loosen and free it from  
5 any adhering particles. Owing to the simultaneous operation of the discharge fan, the dirt will be continuously carried out from the interior by creating a suction therein, thus entirely preventing the escape  
10 of any dirt, etc. to the exterior.

From time to time accumulations of solid matter not removed by the fan may be removed from the interior of the casing by raising the sides 3. The entire structure is  
15 preferably mounted upon casters as shown so that it may be easily moved around upon the floor, connection being made to the motor by wires from any suitable source of power.

The apparatus is comparatively simple in  
20 construction, not liable to get out of order and is capable of performing its functions in a satisfactory and efficient manner. It may be made in different sizes to suit the requirements of use and changed in various details of construction by the skilled mechanic,  
25 but all such changes are to be considered as within the scope of the following claims.

What I claim is:

1. In a carpet cleaning apparatus, the  
30 combination of a main rectangular framework embodying a hollow casing, upwardly

arched transverse supporting bars extending across the upper portion of the casing with intervening clearance spaces, a longitudinally arranged shaft arranged transversely  
35 of and below said bars and provided with flexible beating devices adapted to play upwardly between the bars against the article to be treated, a motor geared with said shaft, a fan within the casing adapted to carry off  
40 refuse material and also geared with said shaft, a vertically arranged arresting screen arranged adjacent to the suction side of said fan, and a vertically adjustable cover for the casing with intervening entrance and exit  
45 openings, substantially as set forth.

2. In a carpet cleaning apparatus, the combination with the casing and carpet cleaning means inclosed therein, of a covering top therefor adapted to be raised and  
50 lowered thereon to provide an entrance and an exit slot, pivotally mounted sectors provided with straps arranged to support and actuate said top, and means for locking said sectors at the desired position, substantially  
55 as set forth.

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

ROBERT B. HUTCHISON.

Witnesses:

C. M. CLARKE,

CHAS. S. LEPLEY.