

No. 870,982.

PATENTED NOV. 12, 1907.

G. S. MATHEWS.  
FLOOR SURFACING MACHINE.  
APPLICATION FILED MAY 1, 1906.

Fig. 1.

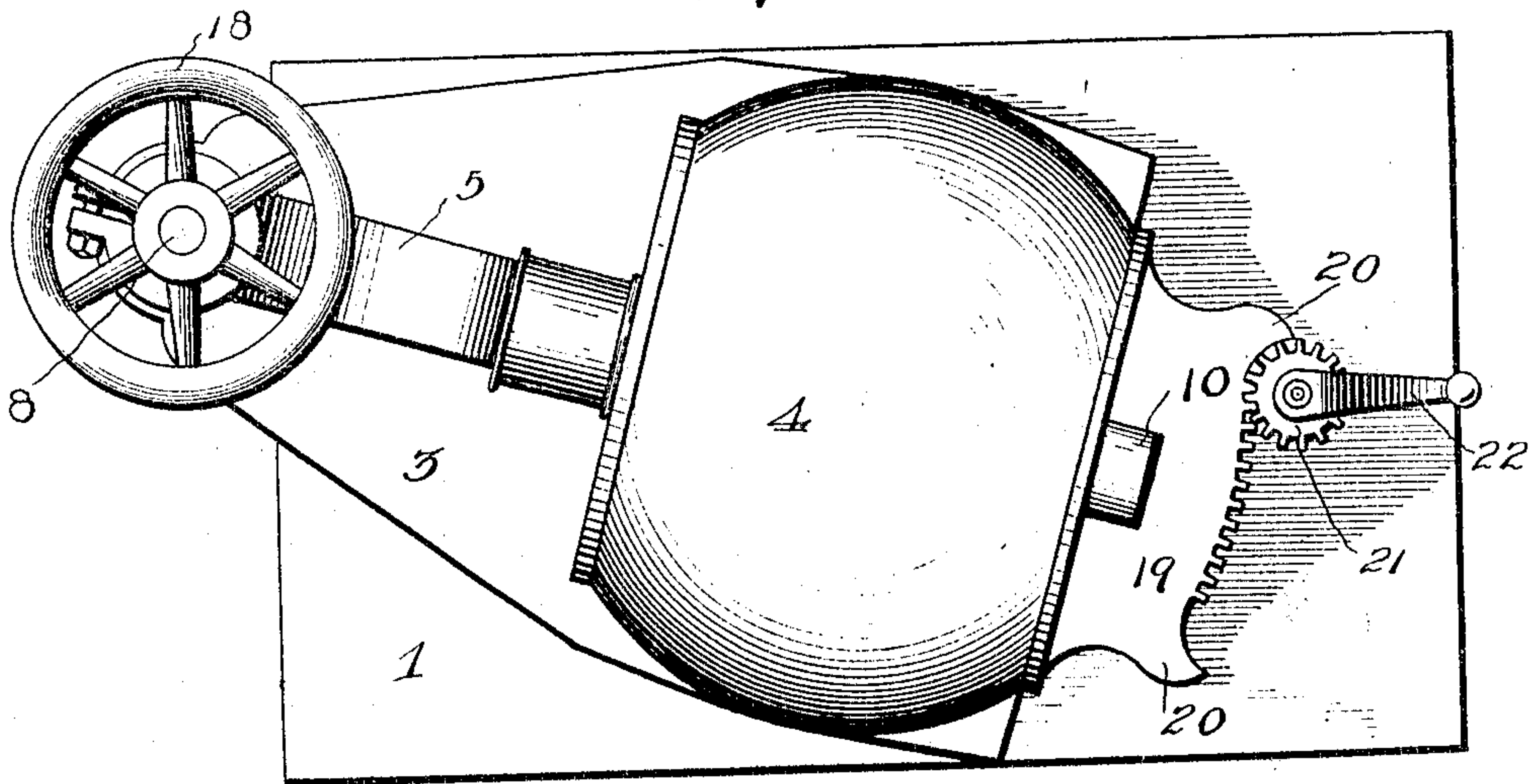
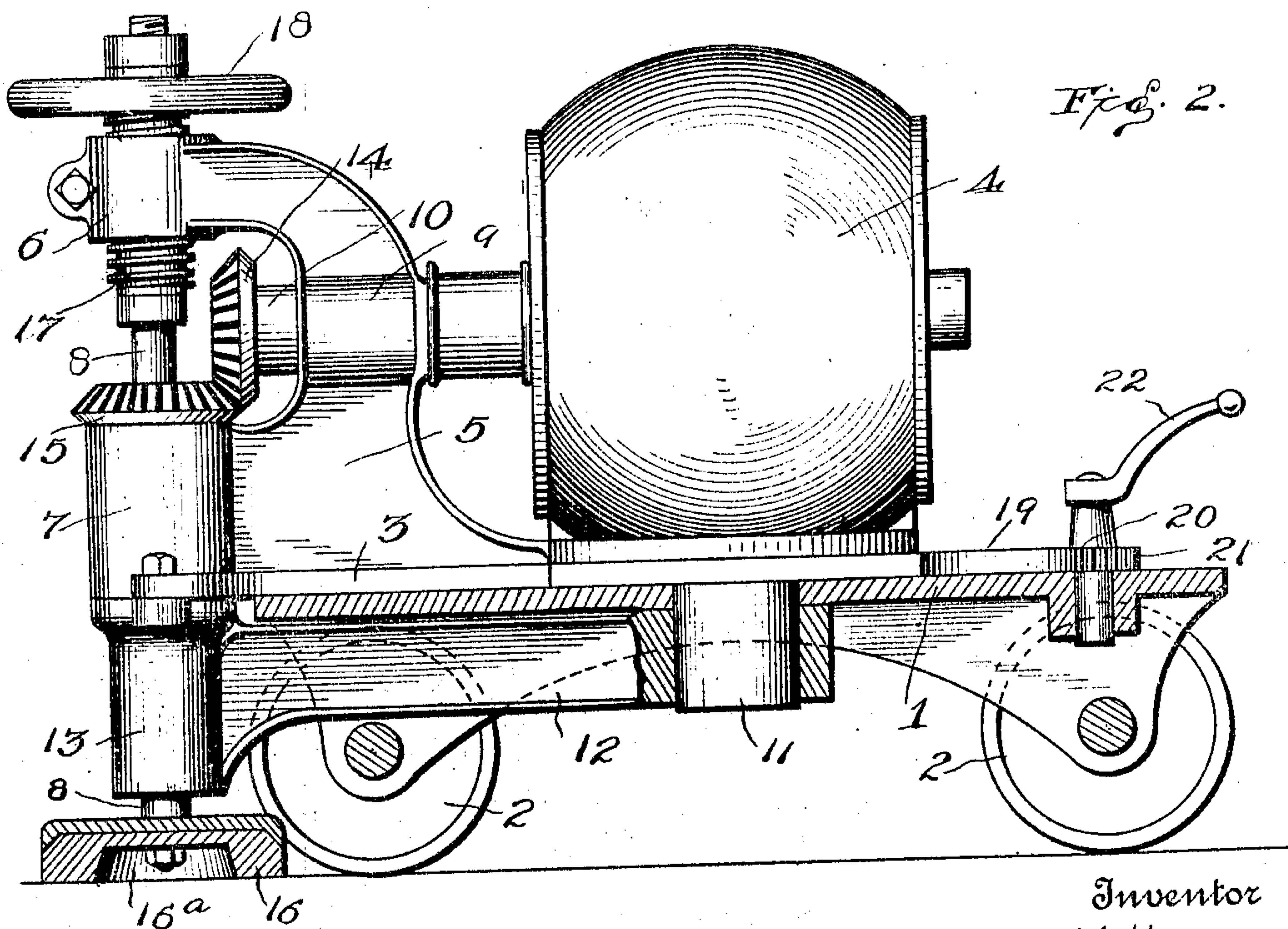


Fig. 2.



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# UNITED STATES PATENT OFFICE.

GEORGE STEPHEN MATHEWS, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-FOURTH TO HENRY C. MANKE AND ONE-FOURTH TO JOHN F. PELLETIER, OF KANSAS CITY, MISSOURI.

## FLOOR-SURFACING MACHINE.

No. 870,982.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed May 1, 1906. Serial No. 314,717.

*To all whom it may concern:*

Be it known that I, GEORGE STEPHEN MATHEWS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have  
5 invented certain new and useful Improvements in Floor-Surfacing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to improvements in machines especially adapted for grinding and polishing floors in initially surfacing or re-surfacing them.

It has for its object to provide a machine of this character which is simple in construction, comparatively  
15 cheap of manufacture and is so designed as to reach all corners, walls and places which are inaccessible to other machines of like nature.

Further objects of the invention will hereinafter become apparent.

20 The invention consists broadly in pivotally mounting the shaft for carrying the grinding or polishing members, together with the mechanism for driving said shaft, upon the main body of a truck whereby a grinding or polishing member, when mounted on its  
25 shaft, may be swung from side to side so as to cover the entire path of the truck and thus do the work of several members mounted so that they cannot be moved out of one position.

30 The invention also consists in the features of construction and combinations of parts hereinafter described and more particularly pointed out in the claims concluding this specification.

In the accompanying drawings illustrating the preferred embodiment of my invention: Figure 1 is a plan  
35 view of a machine constructed in accordance with my invention, and Fig. 2 is a side elevation thereof, partly in central section.

Referring more particularly to the drawings, 1 is the main platform or body of a truck which is formed  
40 by mounting said platform on wheels 2. Upon said truck is pivotally mounted the supplemental platform or table 3 which carries a motor 4 and an arm 5 provided with bearings 6 and 7 for the vertical shaft 8 and a bearing 9 for the motor shaft 10. The pivot lug  
45 or pin 11, for the supplemental table, passes through the platform of the truck and has pivotally mounted on its lower portion a swinging arm 12 also having a bearing 13 for the vertical shaft 8. It will be noted that said bearing extends down near to the floor  
50 or surface to be worked whereby the grinding member is less liable to vibrate and will produce a smoother and more even surface. It is well known that where a true and smooth surface is required it is necessary to support the working or grinding member as near the worked

surface as possible. Said vertical shaft is driven by 55 means of beveled pinions or gears 14 and 15 fitted respectively on the motor shaft and said vertical shaft. On the lower end of said vertical shaft is mounted a grinding or polishing member or disk 16 which may be adjusted vertically by means of a sleeve 17 arranged  
60 around said shaft and carrying a hand-wheel 18, said sleeve having screw connection with the upper bearing on the arm 5.

It will be understood that any other form of disk or wheel for grinding or polishing may be substituted for  
65 that shown in the drawing and wherever the term "grinding member" is used it should be construed to mean any desired form or design of device for either rough grinding or polishing. It will thus be seen that by the use of different grind-members, the machine  
70 may be successfully employed to remove any unevenness in new or old wooden floors and with the use of sand and water it may be used to surface and polish marble, stone or mosaic floors as well as other work.

The rear end of the supplemental platform or table  
75 3 is provided with a rack 19 terminating at each end in a projecting stop 20. A gear or pinion 21, pivoted on the main platform of the truck, engages said rack and is operated to swing the table by means of a hand  
80 lever 22 or any other suitable device.

While I have not shown in the drawing any mechanical device for automatically propelling the truck, such means may be employed whereby the truck may  
85 be moved at any desired speed according to the work to be done. The machine can be tipped up and put in place by workmen with but very little effort.

It will be noted that the grinding or polishing member or disk 16, as shown, is hollow faced, as at 16<sup>a</sup>, whereby said disk, in contact with the grain of the  
90 floor surface at the point of action, works in opposite directions and, in connection with the oscillating of the frame carrying said wheel, works the grain of the wood in four directions at one operation. It is not necessary to use sand with this form of grinding member as it  
95 will cut any surface.

I claim:

1. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, a shaft, carrying a grinding member,  
100 mounted on said supplemental platform, a pivoted arm arranged below the truck platform and also having a bearing for said shaft extending down near to the surface to be worked and means to drive said shaft.

2. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, the pivot lug for said supplemental  
105 platform extending through the main platform, a pivoted arm mounted on said lug below said main platform a

shaft, carrying a grinding member, mounted on said supplemental platform and having a bearing in said pivoted arm extending down near to the surface to be worked, and means to drive said shaft.

- 5 3. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, a shaft, carrying a grinding member, mounted on said supplemental platform, means to drive  
10 said shaft and means to oscillate said supplemental platform comprising a gear pivoted on the truck platform and engaging a rack on said supplemental platform.

4. In a machine of the character described, the combination, with a truck having a main platform, of a supple-

mental platform or table pivotally mounted on the plat- 15  
form of said truck, a shaft, carrying a grinding member, mounted on said supplemental platform, means to drive said shaft and means to oscillate said supplemental platform, comprising a gear pivoted on the truck platform and engaging a rack on said supplemental platform, said rack 20  
having stops at each end thereof, and means to rotate said gear.

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

GEORGE STEPHEN MATHEWS.

Witnesses:

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