

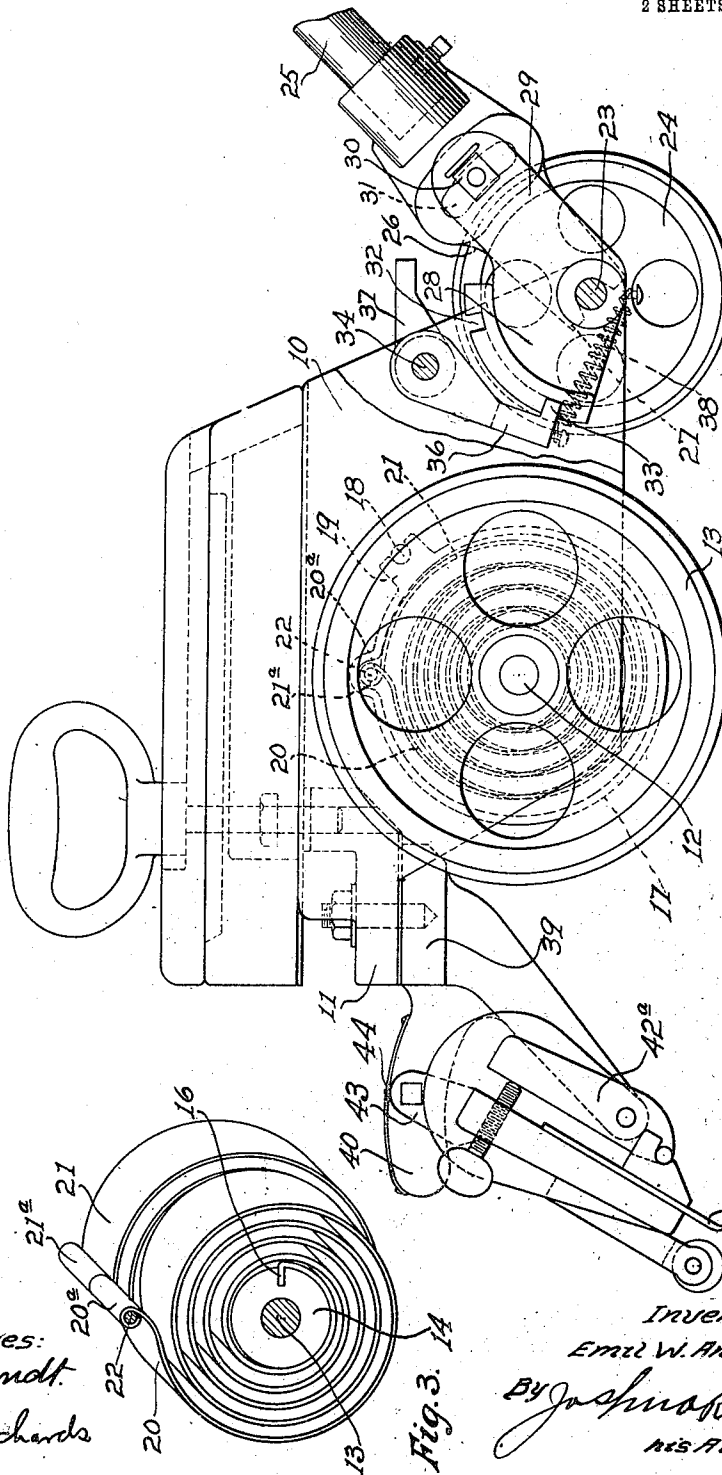
E. W. ANDERSON.
MOTOR FOR FLOOR SCRAPERS AND THE LIKE.
APPLICATION FILED JUNE 12, 1912.

1,060,575.

Patented May 6, 1913.

2 SHEETS-SHEET 1.

Fig. 1.



Witnesses:

N. Brandt.

B. G. Richards

Fig. 3.

Inventor:

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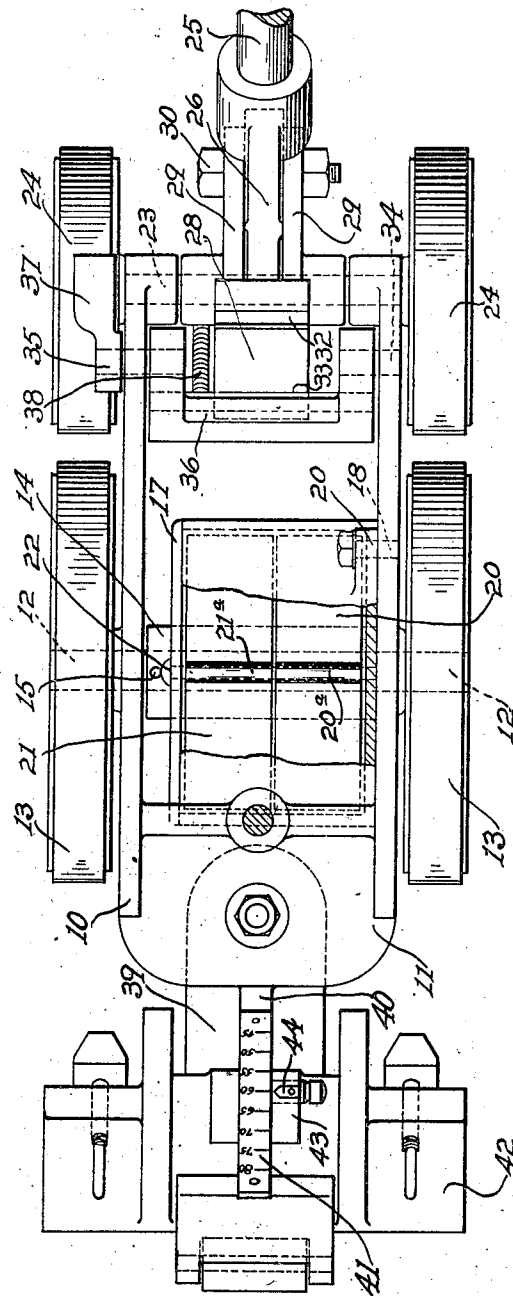


Fig. 2.

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UNITED STATES PATENT OFFICE.

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MOTOR FOR FLOOR-SCRAPERS AND THE LIKE.

1,060,575.

Specification of Letters Patent.

Patented May 6, 1913.

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To all whom it may concern:

Be it known that I, EMIL W. ANDERSON, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Motors for Floor-Scrapers and the Like, of which the following is a specification.

This invention relates to new and useful improvements in motors for floor scrapers and the like of the type adapted for reciprocation over the surface of the floor, wherein the scraping or cutting action thereof is taken upon the stroke or movement of the scraper toward the operator.

The object of the present invention is the construction of a motor for a floor scraper or the like of this type wherein means will be provided for overcoming the inertia at the limit of each stroke of the scraper to aid in starting the scraper upon the return stroke or movement.

With the above and other objects in view, this invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, claimed and illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of a floor scraper constructed in accordance with the present invention, setting forth a portion thereof broken away for purposes of illustration, Fig. 2 is a top plan view thereof, Fig. 3 is a perspective view of the cooperating springs utilized in overcoming the inertia at the terminus of each stroke of the scraper.

Reference being had more particularly to the drawings, 10 indicates a frame or carriage having the forward terminal thereof cut inwardly to provide a horizontal bearing or arm 11. A shaft 12 is mounted transversely for rotation centrally in the vertical sides of the frame or carriage 10 and has the wheels 13 keyed to the terminals thereof for the purpose of bearing upon the floor. A sleeve 14 is mounted upon the shaft 12 and is retained in fixed relation thereto by the pin 15 piercing one terminal of the sleeve 14 and the adjacent portion of the shaft 12. This sleeve is provided with a longitudinal slot 16 therein in which the terminals of the springs, hereinafter more fully described, are secured.

A cylindrical casing 17 is loosely mounted

upon the sleeve 14 adjacent to one side of the frame or carriage 10 and is retained from possible rotation by means of the bolt or stud 18 formed on the side of the frame or carriage 10 engaging the ears or projections 19 formed upon the casing. A coil spring 20 is mounted upon one side of the sleeve 14 and has one terminal thereof bent inwardly and secured in the slot 16 of said sleeve. A similar coil spring 21, wound in the opposite direction to the coil spring 20, is mounted upon the opposite end of the sleeve 14 and likewise has its inner terminal bent inwardly and retained in the slot 16 of the sleeve 14, said coil springs being contained entirely within the casing 17. The outer terminals of the springs 20 and 21 are re-bent to form the transversely arranged loops 20^a and 21^a, respectively. A pin 22 pierces the loops 20^a and 21^a and the sides of the casing 17, said loops extending to said pin from opposite directions, due to the coiling of the springs 20 and 21.

Springs 20 and 21 are normally held in partially wound condition, so that as the frame or carriage 10 is pushed in the direction of the arrow A in Fig. 2, the spring 20 will be wound and spring 21 unwound, so that when the carriage or frame 10 has reached the limit of its forward movement and the operator starts to move the same in reverse direction, the spring 20 will unwind, thus overcoming the inertia and aiding the starting of the movement of frame or carriage 10 in the reverse direction. The movement of the frame or carriage 10 in the reverse direction causes spring 21 to be wound and spring 20 to be unwound so that at the end of this movement spring 21 will assist the operator in overcoming the inertia and starting the device on its return movement. In operating a device of this character, it is the stopping and starting of the same which are difficult to accomplish, it being easy enough to keep the device in motion when once set in motion in the proper direction, so that while during the central portions of the operative motion in either direction, the springs practically neutralize each other, one spring is always wound so as to assist in stopping and restarting the device in the other direction.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable

of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the exact details of construction set forth, but
 5 desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a reciprocatory carriage, of means for storing up energy upon each stroke of the carriage; and means for expending the energy stored up upon
 15 a prior stroke to assist the propulsion of said carriage.

2. The combination with a reciprocatory carriage, of springs arranged for storing up energy upon each stroke of the carriage; and means for expending the energy in
 20 said springs to assist the propulsion of said carriage in each direction.

3. The combination with a reciprocatory wheeled carriage; of oppositely arranged
 25 springs cooperating with said wheels, one of said springs for storing energy upon one movement of the carriage, while the opposite spring expends energy stored on the previous movement of the carriage.

4. The combination with a reciprocatory carriage; of a shaft mounted in said carriage; wheels fixed to said shaft for rotation upon the movement of said carriage; a sleeve rigidly mounted on said shaft; and
 35 oppositely wound springs arranged upon

said sleeve having their inner terminals secured to said sleeve and their outer terminals to said carriage.

5. The combination with a reciprocatory carriage; of a shaft mounted for rotation
 40 therein; traction wheels fixed to said shaft a sleeve rigidly mounted on said shaft provided with a longitudinal groove therein; oppositely wound springs mounted on said sleeve having their terminals bent inwardly
 45 and secured in the groove aforesaid; and a pin securing the outer terminals of said springs to the carriage aforesaid.

6. The combination with a reciprocatory carriage; of a shaft mounted for rotation
 50 therein; traction wheels fixed to said shaft a sleeve rigidly mounted on said shaft having a longitudinal groove formed therein; a casing loosely mounted upon said shaft and secured against movement to said carriage; oppositely wound springs mounted
 55 upon said sleeve having their inner terminals bent inwardly for engagement with the groove aforesaid; and a pin piercing said casing for engagement with the outer terminals of the springs to retain the same from
 60 movement.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMIL W. ANDERSON.

Witnesses:

JOSHUA R. H. POTTS,
 ARTHUR A. OLSON.