

July 20, 1965

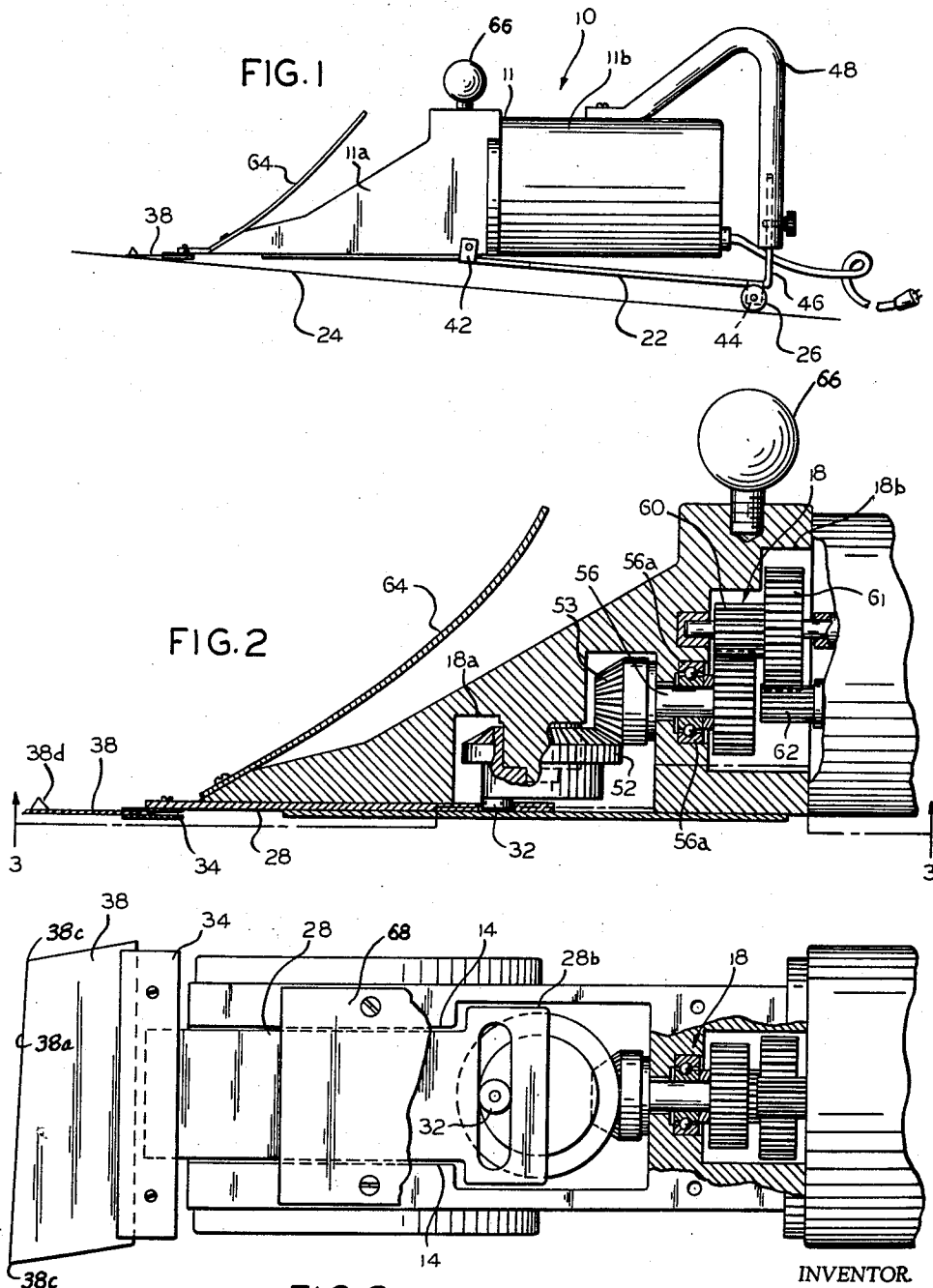
D. TOTH

3,195,232

ELECTRICALLY POWERED STRIPPING DEVICE

Filed Dec. 26, 1962

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

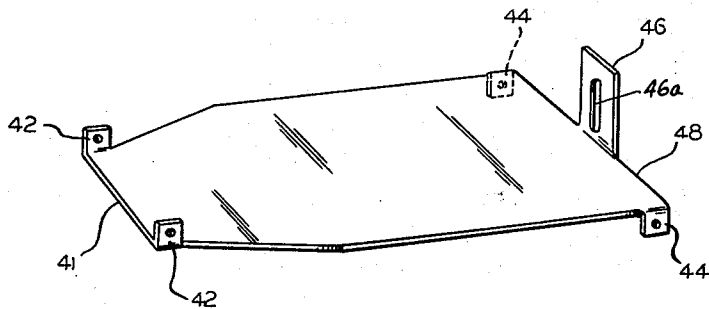


FIG. 4

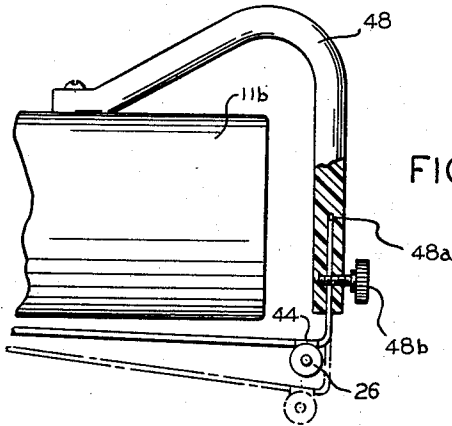


FIG. 5

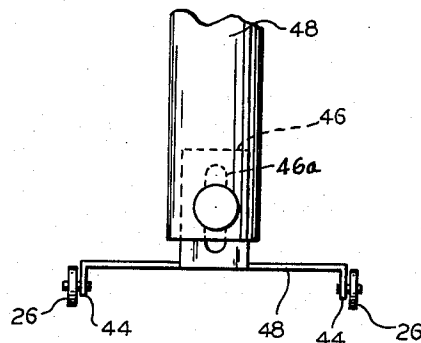


FIG. 6

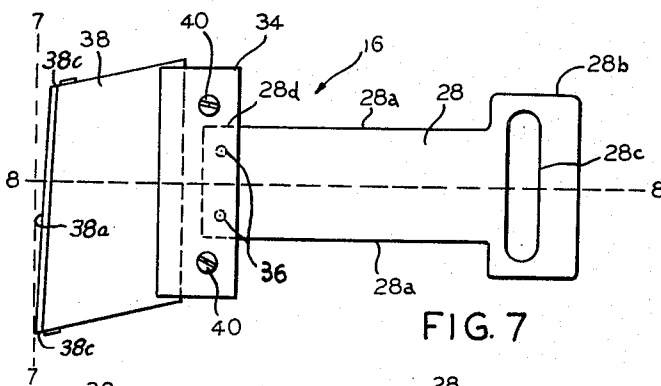


FIG. 7

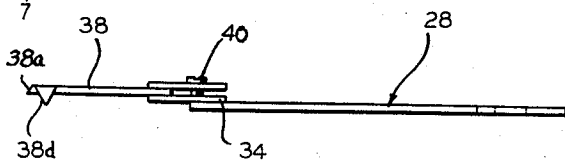


FIG. 8

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3,195,232

ELECTRICALLY POWERED STRIPPING DEVICE
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3 Claims. (Cl. 30-169)

This invention relates to a device for stripping thin layers of material such as wall-paper or the like from a base surface. More particularly this invention relates to an electrically powered stripping device.

In the prior art, devices utilized for accomplishing the removal of wall paper have been entirely unsatisfactory. Steamer mechanisms are generally used to accomplish this objective. The steamer mechanisms are very heavy and cumbersome and difficult to use because of the great amount of heat exhausted therefrom which has at times asphyxiated the operators thereof. Also, the steamer mechanisms are very ineffective when there are many layers of wall paper which have paint coatings on them because the paint forms a seal on each layer of wall-paper, thereby requiring each layer to be removed separately with the steamer. Still further, furniture and perishables must be removed from a room due to the presence of steam being generated. Attempts to improve on these steamer devices have led to mechanical means of scraping wall paper or paint off of a base surface. Such devices are disclosed in U.S. Patent 2,882,594 invented by R. M. Long and U.S. Patent 2,876,537 invented by R. E. Bates. These patents, although suggesting the utilization of mechanical means for removing wall paper or paint from a base surface, do not remove wall-paper as effectively as my invention does. For instance Long discloses a manual device employing a flexible blade which must be moved up and back by hand. The device therein has no means for adjusting the angle of attack of the blade other than by actually bending the blade, thereby increasing the probability of blade breakage. Also the machine in being manually operated cannot be very effective in the removal of wall paper where there are a multitude of layers as there is no power to actuate the blade through the several layers of paper. Bates on the other hand, although being power operated, merely teaches a device having a vibrating blade which is used for the purpose of scraping paint or the like from a base surface in the form of flakes. This device is not suitable for the removal of wall-paper as it removes the wall-paper in small flakes instead of in long strips. The blade, in being formed to point downward, causes the removed portions of the wall-paper to be in the form of flakes instead of long strips because the wall-paper breaks when it is scraped off instead of being stripped off by a cutting action. Also, the vibration of the blade causes damage to plaster.

In order to obviate the disadvantages attendant with prior art scrapers, I have provided a new and improved electrically powered stripping device which includes an electrically powered reciprocating blade, that moves linearly in a straight line path and has a flat shape, in combination with a new and improved pivotally mounted supporting bracket which is selectably positioned to adjust the angle of attack of said cutting blade with regard to the surface being stripped. I have also provided a new and improved cutting blade which will be described more fully herein.

It is therefore a primary object of this invention to provide a new and improved stripping device that will remove wall-paper or the like from a base surface.

It is further an object of this invention to provide a new and improved electrically powered stripping device that will remove wall-paper or the like from a base surface with a minimum of effort.

Still further, it is another object of this invention to provide a new and improved electrically powered stripping device having a new and improved means for adjusting its cutting surface's angle of attack with relation to the base surface.

It is still even further an object of this invention to provide a simplified construction for an electrically powered stripping device so that a light weight, smooth running substantially frictionless machine is provided.

Still even further, it is an object of this invention to provide a new and improved cutting blade for my electrically powered stripping device which has a unique shape that enables it to more efficiently strip wall paper or the like from a base surface by removing same in long pieces.

Other and further objects of this invention pertaining to the specific construction, operation and arrangement of the parts of my invention will fully appear and therefore become more readily apparent when reading the following specification in conjunction with the drawings wherein:

FIG. 1 is a side elevational view of my invention as it actually appears with relation to a base surface, such as a wall.

FIG. 2 is an enlarged partial cross sectional view of the head of my invention illustrated in FIG. 1,

FIG. 3 is a partial sectional view illustrating the bottom of FIG. 2 taken on a plane passing through the line 3-3 and looking in the direction of the arrows,

FIG. 4 is an enlarged perspective view of the pivotally mounted adjustable support bracket illustrated as a part of my invention in FIG. 1,

FIG. 5 is a partial side elevational view illustrating a portion of the handle of my invention in cross section in order that its cavity can be shown adjustably receiving a portion of my pivotally mounted support bracket,

FIG. 6 is a partial rear view of my invention illustrating the relationship between the handle and pivotally mounted support bracket of my invention,

FIG. 7 is a bottom view of the cutting unit of my invention, and

FIG. 8 is a side elevational view of FIG. 7.

Referring more in detail to the figures illustrated in the drawing, I have provided an electrically powered stripping device 10, having a body 11 which includes a head portion 11a and has a rear portion 11b as illustrated in FIG. 1. The head portion 11a has a pair of parallel channels 14 at the bottom thereof which act to restrict motion of a cutting unit 16 slidably received therebetween, as shown in FIGS. 2 and 3. The channels 14 in being formed the way they are, restrict the motion of said cutting unit 16 to linear reciprocation in a straight line path within said channels. Gear means 18 for associating the cutting unit 16 with an electrically powered driving means such as a motor (not shown) is provided, as will be more fully explained hereafter. A pivotally mounted support means 22 is associated with my device for providing a means of adjusting the angle of approach of the cutting unit 16 with respect to a wall-papered base surface 24 such as shown in FIG. 1. The pivotally mounted support means has a pair of wheels 26 rotatably mounted at the rear thereof, which enable the support means 22 to act as a frictionless support for my device in addition to functioning as a means for enabling the adjustment of the angle of approach for said cutting unit.

Cutting unit

As illustrated in the drawings at FIGURES 2, 3, 7 and 8, the cutting unit 16 has a T shaped link 28 that is defined by the parallel sides 28a which are spaced apart a sufficient distance to have a "sliding fit" with the parallel channels 14 in the head portion 11a when the T shaped link is received thereby. The top portion 28b of the T

shaped link 28 has a slotted opening 28c provided therein to associate the cutting unit 16 with an eccentric gear means or cam 32. It will be seen that when the T shaped link 28 is received by the parallel channels 14 in the head portion 11a, the distance that the cutting unit 16 can be moved outward from my device is limited by the extreme position of the eccentric gear means or cam 32 as shown in FIG. 3. The bottom 28d of the T shaped link 28 has a pair of the blade receiving portions 34 removably attached thereto by fastening means such as the screws or rivets 36. A new and improved cutting blade 38 is sandwiched between said blade receiving means 34 as clearly illustrated in FIG. 8. The cutting blade 38 is held tightly in place by the screws 40. The blade 38 has a flat surface with a cutting edge 38a that is inclined at an angle of between 5° and 45° with respect to an imaginary plane 7—7 passing perpendicularly through said linear plane and the straight line path of reciprocation 8—8 illustrated in FIG. 7. The side edges 38b of the cutting blade 38 as illustrated in FIG. 7 are also inclined, they being inclined at an angle between 5° and 20° with respect to said straight line path 8—8 in one direction. In order to prevent the extreme points 38c located on the cutting edge of the cutting blade from piercing into a base surface, I have provided projecting fin portions 38d which are integral with the cutting blade 38 as clearly illustrated in FIG. 8. The fin portions 38d are formed integral with the blade 38 and are then bent to the position shown in the drawing.

It should be realized that other means of holding the cutting blade 38 of the cutting unit 16 are contemplated and although I have provided a new and improved shape of blade, my invention should not be necessarily limited to the shape of the blade disclosed. Although other flat blades without fin portions can be used wherein the sides and cutting edges thereof are not inclined, experiments with my device indicate that the blade that I have defined herein has many advantages over other alternative shapes.

Pivotally mounted support means

As mentioned hereinbefore, the pivotally mounted support means 22 of my device is associated with my device for providing a means of adjusting the angle of approach of the cutting unit 16 with respect to a base surface 24, which is shown in FIG. 1. As illustrated in FIGS. 1, 4, 5 and 6, the support means includes a front portion 41, having means such as the front lugs 42 pivotally associated with the bottom of my device. The support means extends from the front portion thereof in a flat platformlike manner and has rear lugs 44 extending downward therefrom to be associated with the wheels 26. A finger portion 46 extends upward from substantially to the middle of the rearward portion 48 and has a slotted longitudinal opening 46a as will be seen from FIG. 5. My device has a handle 48 which is attached to the top of the rear portion 11b and extends upwardly and around the back of the rear portion for association with the finger portion 46 of my pivotally mounted support means or plate 22. The handle 48 has a cavity 48a which receives the finger portion 46 as illustrated in FIG. 5 so that an adjustable attachment is made. The handle 48 has a threaded fastening member 48b attached thereto and positioned for protruding through the slotted opening 46a whereby when a desired setting of the pivotally mounted support place is located, the mere tightening of the threaded fastening member 48b secures the pivotally mounted support blade in position.

It should be realized that other means for associating the pivotally mounted support means with my invention are contemplated and that other shapes of pivotally mounted support means are contemplated. Therefore my invention should not necessarily be limited to the particular shape shown nor to the manner in which the pivotally mounted support blade is associated with the handle 48 of my device. For instance, the pivotally mounted sup-

port blade could possibly have its finger portion associated with the back of the rear portion 11b instead of the handle 48. Still further, it is intended that the invention not be limited to any type of pivotally mounted support means as this invention could work without this. Although my invention works better with the pivotally mounted support means, it is operative without this as the operator can by himself adjust the angle of attack of the blade by positioning the device himself.

Gear means for associating cutting unit with electrical power

In associating the cutting unit with electrical powered driving means such as a motor, there are many well known alternatives that can be used. In my preferred embodiment, the gear means 18 is located in the cavities 18a and 18b of the head 11a. The eccentric gear means or cam 32 is disposed in the slotted opening 28c of the T shaped link 28 as illustrated in FIGURES 2 and 3. The eccentric is fixedly attached to a bevel gear 52 which is rotatably mounted in the cavity 18a of the head portion 11a and is associated with the driving bevel gear 53, which is also pivotally mounted in the cavity 18a of the head portion. The bevel gear 53 is fixedly attached to a shaft 56 that is journaled in the head portion on the bearings 56a and protrudes through a wall 58 in the head portion which separates the chambers 18a and 18b. The other end of the shaft has a gear which is associated with the electrically powered motor (not shown) via a train of spur gears such as the gears 60, 61 and pinion 62, as illustrated in FIG. 2. Therefore when the pinion 62 is driven rotatably, the eccentric 32 ultimately is caused to rotate and in being associated with the slotted opening 28c of the T shaped link, harmonic reciprocating motion of said link is accomplished.

Operation and summary of my device

In summary, my invention furnishes a solution to the long time problem of removing wall paper by providing an electrical powered linearly reciprocating blade which is flat. The operator of this device can accomplish the removal of wall-paper by stripping long pieces off of a base portion with less time and less effort spent. In order to safely guide the long pieces of material stripped from the base surface by my device, I have provided a curved guard 64. Also a positioning grip means 66 is provided for the purpose of having the free hand which is not holding the grip means available for positioning or steadying my device. Also from FIGURE 3, it will be seen that a bottom cover plate 68 is attached to my device for the purpose of holding the T shaped link in place within its parallel channels 14. This bottom cover plate can be easily disassembled from my device in order that access can be gained thereto.

Although I have shown a specific construction of my device, I am fully cognizant of the fact that many changes in the shape and contour may be made without effecting its operativeness, and I reserve the rights to make such changes as I may deem convenient without departing from the spirit of my invention, or the scope of the claims.

I claim:

1. An electrically powered stripping device comprising: a body having a head portion with parallel channels, an electrically powered driving means, a cutting unit received by said channels to restrict motion of said cutting unit to linear reciprocation in a straight line path within said channels and said head, means for associating said electrically powered driving means with said cutting unit to drive it reciprocally, a blade member having a sharp cutting edge extending from said cutting unit, and a support means pivotally mounted to said body for enabling the adjustment of the angle of approach of said blade with respect to a wallpapered base surface, said support means comprising a front portion pivotally associated with said body, a rear portion having wheels

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on both sides thereof rotatably mounted thereon, with means for selectively associating said support means in a certain position with relation to said body, whereby the angle of said support means can be selectively chosen to vary the angle of attack of said blade in order that long strips of wallpaper or the like can be stripped from a base surface by the reciprocating action of said blade without any wobbling of said stripping device.

2. An electrically powered stripping device, as defined in claim 1, wherein said means attached thereto for enabling the selectable adjustment of the angle of approach of said blade with respect to a wall-papered base surface, comprises: a finger portion extending from the rear portion of said support means, and fastening means associating said support means with said body for selectably fixing the position of said finger portion with relation to said body, whereby the angle of said support means can be selectably chosen to vary the angle of attack of said blade with respect to said wall-papered surface.

3. An electrically powered stripping device, as defined in claim 1, having a handle portion extending from said body, said handle portion having means for adjustably associating it with said finger portion, whereby said

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handle portion and said finger portion can be selectively attached together by said fastening means to vary said angle of attack of said blade and furnish a frictionless support for said device with respect to said wall-papered surface.

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