

## **Kirby patents**

1908

Vibrator for movement- cure purposes 891,776 June 23 assigned to L. Sands, Cleveland , Ohio

1911

Fluid actuated vibrator 1,008,476 November 14

Vacuum producing machine 1,010,388 November 28

1912 – 0

1913 -0

1914

Vacuum cleaner 1,100,575 June 16 assignor to HB Barnett & HM Farnsworth, Cleveland, Ohio

1915

Handhold vacuum cleaner 1,156,235 October 12

1916

Vacuum producing machine reissue 14,100 April 4

Lubricating device 1,182,092 May 9

Electric radiator 1,182,688 May 9

Vacuum cleaner bag 1,182,404 May 9 assigned to Noguchi, Shuhei – New York, NY

Vacuum cleaning machine 1,184,458 May 23

Pneumatic cleaner 1,184,459 May 23

Suction cleaner 1,192,830 July 25

Vacuum cleaner nozzle 1,191,999 July 25 assigned to Roever, August E Brooklyn, NY

Handle switch for suction cleaners 1,195,363 August 22

Pneumatic cleaner 1,206,116 November 28

Pneumatic cleaner 1,206,117 November 28

Vacuum cleaning machine 1,209,718 Dec ember 26

Vacuum cleaning machine 1,209,719 Dec ember 26

Vacuum cleaning machine 1,209,720 December 26

Vacuum cleaning device 1,209,721 December 26

Vacuum cleaning machine 1,209,722 December 26

1917

Suction cleaner 1,214,796 February 6

Vacuum cleaning machine 1,236,944 August 14

## 1918

Suction cleaner 1,257,288 February 19  
Agitating device for vacuum cleaner nozzle 1,265,790 May 14  
Vacuum cleaning machine 1,265,789 May 14  
Vacuum cleaning machine 1,265,791 May 14  
Washing machine 1,277,603 September 3  
Washing machine 1,277,604 September 3

## 1919

Vacuum cleaner 1,294,473 Feb 18  
Drain cock 1,299,480 April 8  
Suction cleaner 1,302,929 May 6  
Collecting bag for vacuum cleaner 1,302,886 May 6 assigned to Wagner, Frank J. - Detroit Michigan  
Washing machine 1,323,774 December 2

## 1920

Washing machine 1,337,453 April 20  
Pump 1,1347,512 July 27  
Clutch 1,362,011 December 14  
Brush and making same 1,333,663 March 16 assigned to Electric Vacuum Cleaner Company  
Suction cleaner 1,347,166 July 20 assigned to EVCC  
Suction cleaner 1,347,167 July 20 assigned to EVCC

## 1921

Lake or pond 1,376,889 May 3  
Brushing mechanism for sweepers 1,395,500 November 1

## 1922

Valve operating device for internal combustion engines 1,405,597 February 7  
Washing machine 1,407,201 February 21  
Suction sweeper 1,421,957 July 4  
Suction sweeper 1,421,958 July 4  
Suction cleaner 1,422,105 July 11 assigned to EVCC

## 1923

Cleaner casing 1,447,419 March 6  
Washing Machine 1,447,420 March 6

1924

Shock absorber 1,515,862 November 18

Shock absorber 1,515,863 November 18

1925

Shock absorber 1,540,341 June 2

1926

Ironing machine 1,568,166 January 5

Suction cleaner 1,571,276 February 2

Suction cleaner 1,591,325 July 6

Radio condenser 1,589,008 June 15 with HS Scott

1927

Rebound retarder 1,641,334 September 6

1928 -0-

1929

Suction cleaner 1,698,725 January 15

Washing machine 1,712,755 May 14 ( Dietenberger, Joseph A. Assignor to JB Klrby )

Lubricating device 1,719,983 July 9

Clothes-washing machine 1,741,191 December 31

Clothes-washing machine 1,741,317 December 31

1930

Radio socket 1,767,139 June 24

Mechanical movement 1,783,380 December 2

Motion-arresting means for motor-propelled vehicles 1,784,145 December 9

1931

Clothes-washing machine Reissue 18,280 December 8

Suction cleaner 1,806,168 May 19

Screw retainer 1,816,591 July 28

Clothes washing machine 1,834,492 December 1

1932

Laundry machine 1,842,030 Jan 19

Centrifugal machine 1,853,866 April 12

Laundry machine 1,886,888 November 8

1933

Pivotal connection 1,892,896 January 3

Washing machine 1,905,912 April 25

Laundry machine 1,1911,903 May 30 assigned to Industrial Improvements Inc. Cleveland , Ohio

Laundry machine 1,911,904 May 30 assigned to Industrial Improvements Inc. Cleveland , Ohio

Dish washing machine 1,927,665 September 19 assigned to Industrial Improvements Inc. Cleveland , Ohio

Laundry machine 1,932,246 October 24 assigned to Industrial Improvements Inc. Cleveland , Ohio

1934

Window washer 1,982,345 November 24

Suction cleaning apparatus 1,949,052 February 27 assigned to Industrial Improvements Inc. Cleveland, Ohio

Suction cleaner casings DES 91886 April 3 assigned to Industrial improvements Inc. Cleveland, Ohio

Washing machine 1,950,732 March 13 assigned to Industrial Improvements Inc. Cleveland, Ohio

Suction carpet cleaner 1,952,014 March 20 assigned to Industrial Improvements Inc. Cleveland, Ohio

Laundry machine 1,957,142 May 1 assigned to Industrial Improvements Inc. Cleveland, Ohio

Laundry machine 1,964,882 July 3 assigned to Industrial Improvements Inc. Cleveland, Ohio

Suction cleaner 1,976,998 October 16 assigned to Industrial Improvements Inc. Cleveland, Ohio

Suction cleaner 1,983,175 December 4 assigned to Industrial Improvements Inc. Cleveland, Ohio

Washing machine 1,969,176 August 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Laundry Machine 1,969,177 August 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Laundry Machine 1,969,178 August 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Laundry Machine 1,969,179 August 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

1935

Dishwashing machine 1,995,927 March 26 assigned to The Apex Electrical Manufacturing Company, as trustee

Laundry machine 1,995,925 March 26 assigned to The Apex Electrical Manufacturing Company as trustee

Laundry machine 1,995,926 March 26 assigned to The Apex Electrical Manufacturing Company as trustee

Laundry machine 2,001,965 May 21 assigned to The Apex Electrical Manufacturing Company as trustee

Laundry machine 2,009,111 July 23 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Filter for dry cleansing liquid 2,016,550 October 8 assigned to The Apex Electrical Manufacturing Company

Fabric cleansing and extracting machine 2,019,571 Nov 5 assigned to Apex Company as trustee

1936

Clothes washing machine 2,046,901 July 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Ironing machine 2,051,449 August 18 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Pneumatic cleaner 2,053,563 September 8 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

1937

Dishwashing machine 2,078,670 April 27

Air treating apparatus 2,087,436 July 20

Clothes washing machine re.20,313 March 30 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Laundry machine 2,067,572 January 12 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Washing machine 2,072,047 Feb 23 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Air conditioning apparatus 2,074,265 March 16 assigned to Industrial Improvements Inc. Cleveland, Ohio

Suction sweeper 2,079,293 May 4 assigned to Industrial Improvements Inc. Cleveland, Ohio

Fabric cleaning machine 2,089,559 Aug 10 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Laundry machine 2,095,505 October 12 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

1938

Suction cleaner 2,107,571 February 8

Suction cleaner 2,109,621 March 1

Laundry machine 2,105,218 January 11 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Laundry machine 2,109,620 March 1 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Laundry machine 2,116,759 May 10 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Fabric cleansing machine 2,119,918 June 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Clothes washing machine 2,135,084 Nov 1 to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Laundry machine and method 2,137,775 Nov 22 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

1939

Suction sweeper 2,172,911 September 12

1940

Suction sweeper 2,221,745 November 12

Vacuum cleaner 2,221,746 November 12

1941

washing machine 2,228,057 Jan 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Laundry machine 2,231,189 Feb 11 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Washing machine 2,235,452 March 18 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

washing machine 2,249,562 July 15 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

1942

Suction cleaner 2,289,711 July 14

Handle construction 2,290,336 July 21

Washing machine 2,302,634 Nov 17 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

1943

Combined clothes washer and extractor 2,331,699 Oct 12 assigned to The Apex Electrical Manufacturing Co.

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1944

Laundry machine 2,344,253 March 14 assigned to The Apex Electrical Manufacturing Co. Cleveland, Ohio as trustee

1945

Laundry machine 2,381,545 August 7 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

1946

Laundry machine 2,396,105 March 5 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Driving mechanism 2,397,869 April 2

1947

Apparatus for washing clothes 2,432,766 Dec 16 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

1948 -0

1949 -0

1950

Vacuum cleaner 2,500,832 March 14

Vacuum cleaner with auxiliary suction tube and automatically controlled brush drive 2,504,846 April 18

Apparatus for washing clothes 2,520,366 August 29 assigned to The Apex Electrical Manufacturing Company

Filter cleaner for vacuum dust collectors 2,534,171 Dec 12

1951

Airflow controlled nozzle adjustment for vacuum cleaners 2,555,887

1952

Washing machine 2,580,435 Jan 1 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio

Automatic nozzle adjusting device for vacuum cleaners 2,583,054 Jan 22

Sweeper-type vacuum cleaner having automatic nozzle adjustment 2,592,710 April 15

Washing machine provided with vibration dampener and mounting 2,614,410 Oct 21 assigned to Apex

1953

Combined washing and extracting machine 2,645,917 July 21 assigned to Apex

Vacuum cleaner 2,648,396 Aug 11

Fishing reel 2,648,506 Aug 11

Washing machine 2,658,372 Nov 10 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

1954

Wobbling basket type clothes washing machine 2,672,744 March 23 assigned to Apex

Laundry Machine 2,683,364 cl. 68-23 assigned to The Apex Electrical Manufacturing Company, Cleveland, Ohio as trustee

Dishwashing machine 2,691,986 cl. 134-58

Reciprocating cutter and saw 2,694,282 cl. 56 -26.5

1955

Washing and extracting machine 2,699,660 cl. 68-23 assigned to The Apex Electrical Manufacturing Company

Portable seat back 2,710,646 cl. 155-133

Combined washing machine and extractor 2,715,826 cl. 68-23 assigned to The Apex Electrical Manufacturing Company

1956 -0

1957

Clothes washing machine 2,797,569 July 2 cl. 68-23 assigned to The Apex Electrical Manufacturing Company

Acceleration control device for centrifugal extractors 2,802,356 Aug 13 cl. 68-23 assigned to Apex

1958

Vacuum cleaner 2,823,411 Feb. 18 cl. 15-352

Vacuum cleaner nozzle adjustment 2,823,412 Feb 18 cl. 15-354

Washing machine 2,823,975 Feb 18 cl. 8-159 assigned to The Apex Electrical Manufacturing Company

1959

Dishwashing machine 2,877,779 March 7 cl. 134-57

1960 -0

1961-0

1962 -0

1963 Tooth-cleaning device 3,106,216 Oct 8 cl. 132-92