

## U.S. PATENT NUMBER

6,489,803	6,956,518	7,209,011
6,507,215	6,956,520	7,224,210
6,509,758	6,968,472	7,227,913
6,559,629	6,970,717	7,228,109
6,580,376	6,987,424	7,230,504
6,583,609	6,988,227	7,236,024
6,590,426	7,024,221	7,250,825
6,630,868	7,024,539	7,251,112
6,639,534	7,031,683	7,253,693
6,657,488	7,035,607	7,254,169
6,686,803	7,035,611	7,259,628
6,737,913	7,046,035	7,272,373
6,738,858	7,058,372	7,272,374
6,765,445	7,064,617	7,272,375
6,804,497	7,068,110	7,280,001
6,812,744	7,081,796	7,281,176
6,819,274	7,084,709	7,283,075
6,831,523	7,098,732	7,283,503
6,839,795	7,098,742	7,286,513
6,856,206	7,098,753	7,288,998
6,856,236	7,102,865	7,289,477
6,876,742	7,113,009	7,295,077
6,879,004	7,113,011	7,302,247
6,879,806	7,119,526	7,304,530
6,882,295	7,119,527	7,310,039
6,882,298	7,127,217	7,321,225
6,885,219	7,141,883	7,324,561
6,886,089	7,142,835	7,325,167
6,891,487	7,145,359	7,332,975
6,898,689	7,148,753	7,333,833
6,900,660	7,177,610	7,339,503
6,909,390	7,177,617	7,339,504
6,917,658	7,180,377	7,340,230
6,920,622	7,183,864	7,342,460
6,928,501	7,187,193	7,343,504
6,949,900	7,187,216	7,348,809
6,950,044	7,187,241	7,352,207
6,950,047	7,190,933	7,355,476
6,950,052	7,199,641	7,362,826
6,954,170	7,205,852	7,363,046

## U.S. PATENT NUMBER

7,366,478	7,518,350	7,676,210
7,370,214	7,528,590	7,679,162
7,373,533	7,536,164	7,680,041
7,375,411	7,536,570	7,680,976
7,375,591	7,536,608	7,688,119
7,376,212	7,542,516	7,701,685
7,376,396	7,548,123	7,702,362
7,376,399	7,548,738	7,705,639
7,379,723	7,548,799	7,714,674
7,382,181	7,551,009	7,715,165
7,394,329	7,554,134	7,729,675
7,405,601	7,558,902	7,737,673
7,405,628	7,561,865	7,737,871
7,414,480	7,562,275	7,738,568
7,417,510	7,570,933	7,742,352
7,417,877	7,577,223	7,746,262
7,421,028	7,577,224	7,747,228
7,421,251	7,580,481	7,755,448
7,426,376	7,583,937	7,756,504
7,428,159	7,587,184	7,764,131
7,436,227	7,591,201	7,764,134
7,436,252	7,595,209	7,772,934
7,441,131	7,609,494	7,773,354
7,443,250	7,609,798	7,777,585
7,443,911	7,613,267	7,782,813
7,447,492	7,613,901	7,787,827
7,459,948	7,622,963	7,791,221
7,460,604	7,624,157	7,793,124
7,471,940	7,627,302	7,800,415
7,482,666	7,634,028	7,800,451
7,486,386	7,640,455	7,804,859
7,492,139	7,647,510	7,821,251
7,493,505	7,649,425	7,821,440
7,498,656	7,649,875	7,825,708
7,498,787	7,650,119	7,830,216
7,505,540	7,650,130	7,834,706
7,511,388	7,660,968	7,835,706
7,511,930	7,667,542	7,839,225
7,512,203	7,671,688	7,852,061
7,516,340	7,675,262	7,855,445

## U.S. PATENT NUMBER

7,855,669	7,999,523	8,150,358
7,856,219	7,999,734	8,151,029
7,860,480	8,000,288	8,154,358
7,863,981	8,004,863	8,155,610
7,863,989	8,007,167	8,166,222
7,873,854	8,009,776	8,169,108
7,873,856	8,010,819	8,174,415
7,876,124	8,013,659	8,179,163
7,876,135	8,019,302	8,184,488
7,876,167	8,023,556	8,188,804
7,881,692	8,023,557	8,188,926
7,882,282	8,023,918	8,193,822
7,902,627	8,027,394	8,193,867
7,904,035	8,032,090	8,194,569
7,904,040	8,041,975	8,195,115
7,908,500	8,049,475	8,198,951
7,913,012	8,049,573	8,203,370
7,928,878	8,055,932	8,203,385
7,932,577	8,060,049	8,207,766
7,941,102	8,060,066	8,208,884
7,949,319	8,064,179	8,213,192
7,955,886	8,064,861	8,219,705
7,956,517	8,064,872	8,223,783
7,956,787	8,072,236	8,223,820
7,957,696	8,076,754	8,224,259
7,960,860	8,086,211	8,224,279
7,962,113	8,089,874	8,225,128
7,962,773	8,095,710	8,228,431
7,969,251	8,111,204	8,229,377
7,970,125	8,111,535	8,237,869
7,973,563	8,112,576	8,242,844
7,973,603	8,115,663	8,242,849
7,974,596	8,126,420	8,248,175
7,977,816	8,129,973	8,249,543
7,979,048	8,130,882	8,253,613
7,979,168	8,130,888	8,254,862
7,984,516	8,136,409	8,260,236
7,986,926	8,145,170	8,260,244
7,986,929	8,145,172	8,261,104
7,995,981	8,150,346	8,261,165

## U.S. PATENT NUMBER

8,264,255	8,451,032	8,555,131
8,264,387	8,451,376	8,559,570
8,265,584	8,456,228	8,564,256
8,274,466	8,456,242	8,569,679
8,280,319	8,461,880	8,571,512
8,290,457	8,462,903	8,576,343
8,300,652	8,463,215	8,582,431
8,306,491	8,463,223	8,587,398
8,320,863	8,467,483	8,593,119
8,326,252	8,471,404	8,593,526
8,331,887	8,471,629	8,598,946
8,341,486	8,487,697	8,599,312
8,346,202	8,489,058	8,604,884
8,357,958	8,493,146	8,605,224
8,358,285	8,494,470	8,611,844
8,358,994	8,497,531	8,615,213
8,369,906	8,502,584	8,618,844
8,374,296	8,503,956	8,618,848
8,375,231	8,503,962	8,620,237
8,378,724	8,507,954	8,626,178
8,384,031	8,507,955	8,626,251
8,384,559	8,508,298	8,629,723
8,385,867	8,509,790	8,629,794
8,386,088	8,513,989	8,630,072
8,402,302	8,514,118	8,633,743
8,402,823	8,515,373	8,633,844
8,405,030	8,515,416	8,634,502
8,406,371	8,520,347	8,643,138
8,410,830	8,521,099	8,643,391
8,412,961	8,526,897	8,643,419
8,417,206	8,531,246	8,644,365
8,422,964	8,531,325	8,648,395
8,428,534	8,532,236	8,648,664
8,428,536	8,532,243	8,649,134
8,428,539	8,532,601	8,654,484
8,433,271	8,538,365	8,660,300
8,433,970	8,538,366	8,666,349
8,441,291	8,542,144	8,669,131
8,441,325	8,543,077	8,669,892
8,450,992	8,548,031	8,671,286

## U.S. PATENT NUMBER

8,681,026	8,823,414	8,946,868
8,682,275	8,825,921	8,948,708
8,686,806	8,829,945	8,949,302
8,688,052	8,829,996	8,952,751
8,691,609	8,831,521	8,952,839
8,692,599	8,836,392	8,954,632
8,698,471	8,837,611	8,959,274
8,699,630	8,837,646	8,959,382
8,704,152	8,843,080	8,966,233
8,706,069	8,848,110	8,970,287
8,712,344	8,848,170	8,975,914
8,716,886	8,852,513	8,975,970
8,717,005	8,854,130	8,976,969
8,723,149	8,860,514	8,981,860
8,724,532	8,861,229	8,983,417
8,725,099	8,872,554	8,983,419
8,725,103	8,874,060	8,988,008
8,729,925	8,875,578	8,988,263
8,730,404	8,878,528	8,988,660
8,731,042	8,878,570	8,989,330
8,736,348	8,880,018	8,994,420
8,736,476	8,880,749	8,995,940
8,737,532	8,885,106	9,000,833
8,749,417	8,885,482	9,001,653
8,750,817	8,903,332	9,001,945
8,750,819	8,904,076	9,002,306
8,754,542	8,908,750	9,007,119
8,762,586	8,912,496	9,013,975
8,768,281	8,912,785	9,018,715
8,774,328	8,913,051	9,020,165
8,774,750	8,914,563	9,032,129
8,781,421	8,914,564	9,036,091
8,781,428	8,914,624	9,036,740
8,786,341	8,918,067	9,036,762
8,791,734	8,922,418	9,038,480
8,803,096	8,928,820	9,041,452
8,803,360	8,930,591	9,041,569
8,804,865	8,934,528	9,041,584
8,816,752	8,941,394	9,042,499
8,818,309	8,946,856	9,048,547

**U.S. PATENT NUMBER**

9,048,777	9,207,704	9,385,747
9,048,821	9,209,838	9,407,276
9,054,672	9,209,912	9,414,217
9,058,761	9,219,512	9,426,603
9,065,657	9,220,050	9,429,468
9,077,652	9,231,402	9,438,165
9,083,354	9,231,579	9,438,290
9,088,948	9,236,867	9,444,406
9,094,042	9,240,794	9,461,653
9,094,634	9,240,795	9,473,150
9,095,041	9,246,494	9,479,199
9,099,922	9,246,500	9,479,892
9,099,994	9,250,137	9,484,925
9,106,265	9,251,107	9,489,000
9,106,867	9,252,891	9,490,818
9,118,374	9,253,007	9,490,865
9,118,392	9,256,558	9,491,394
9,118,533	9,257,836	9,496,906
9,124,334	9,258,596	9,502,399
9,136,824	9,264,080	9,503,113
9,143,112	9,264,084	9,503,841
9,143,373	9,264,754	9,509,278
9,154,084	9,270,288	9,510,289
9,157,937	9,274,140	9,515,671
9,160,166	9,307,318	9,525,440
9,160,465	9,312,899	9,529,748
9,164,936	9,312,972	9,531,253
9,166,576	9,319,027	9,531,284
9,166,812	9,324,701	9,531,376
9,172,344	9,332,376	9,531,394
9,172,361	9,342,084	9,537,581
9,176,558	9,343,971	9,553,565
9,178,451	9,350,412	9,553,572
9,178,549	9,356,606	9,564,915
9,178,592	9,362,936	9,565,065
9,190,957	9,369,146	9,570,908
9,190,975	9,378,782	9,572,109
9,196,962	9,379,098	9,576,679
9,197,510	9,379,676	9,582,016
9,204,080	9,379,879	9,584,347

## U.S. PATENT NUMBER

9,588,497	9,735,145	9,923,643
9,590,630	9,735,748	9,923,710
9,590,644	9,736,709	9,927,779
9,599,643	9,736,777	9,935,649
9,602,110	9,742,209	9,942,848
9,608,681	9,742,397	9,945,690
9,609,464	9,742,423	9,948,313
9,612,893	9,742,611	9,954,430
9,614,528	9,746,505	9,954,515
9,625,925	9,748,963	9,954,692
9,634,678	9,762,250	9,958,888
9,634,861	9,780,757	9,960,756
9,641,186	9,780,816	9,964,986
9,645,621	9,787,310	9,966,781
9,647,623	9,787,388	9,966,900
9,647,670	9,793,240	9,966,960
9,647,824	9,793,873	9,966,965
9,658,975	9,798,686	9,967,722
9,668,209	9,800,233	9,973,285
9,673,833	9,800,281	9,978,887
9,674,010	9,806,521	9,979,282
9,680,420	9,812,989	9,979,404
9,680,608	9,813,023	9,980,277
9,689,724	9,817,636	9,983,643
9,696,272	9,817,665	9,984,009
9,698,654	9,819,524	9,989,585
9,698,674	9,823,687	9,989,927
9,698,767	9,831,836	9,998,277
9,698,807	9,831,889	10,003,482
9,705,514	9,836,071	10,008,981
9,705,521	9,841,804	10,020,815
9,705,668	9,846,205	10,033,364
9,710,031	9,860,392	10,033,421
9,712,176	9,866,215	10,041,981
9,712,261	9,866,238	10,044,383
9,713,090	9,870,103	10,056,899
9,720,875	9,874,887	10,057,051
9,726,696	9,886,412	10,061,740
9,727,159	9,893,823	10,063,048
9,729,162	9,921,683	10,063,084

## U.S. PATENT NUMBER

10,063,188	10,222,421	10,397,025
10,063,203	10,230,345	10,404,209
10,067,478	10,249,611	10,404,446
10,067,554	10,254,176	10,411,583
10,068,046	10,256,199	10,419,047
10,075,173	10,256,854	10,423,174
10,077,994	10,256,858	10,437,659
10,078,600	10,263,523	10,440,570
10,078,616	10,270,272	10,447,822
10,084,376	10,270,457	10,454,268
10,084,469	10,277,519	10,454,420
10,090,674	10,278,200	10,461,701
10,090,818	10,289,840	10,461,787
10,090,838	10,291,755	10,461,920
10,101,371	10,296,025	10,461,963
10,103,759	10,296,026	10,461,964
10,110,177	10,305,676	10,468,983
10,120,005	10,310,528	10,469,075
10,128,857	10,312,955	10,469,112
10,128,930	10,317,508	10,469,295
10,139,896	10,318,357	10,483,987
10,141,971	10,320,509	10,488,269
10,153,084	10,320,528	10,488,456
10,153,909	10,326,375	10,491,157
10,154,394	10,326,537	10,492,050
10,158,354	10,331,592	10,497,455
10,164,593	10,333,213	10,498,352
10,164,643	10,333,750	10,511,273
10,165,516	10,340,894	10,511,312
10,169,256	10,342,028	10,511,315
10,172,105	10,348,283	10,514,747
10,175,271	10,355,477	10,515,708
10,175,707	10,355,642	10,520,547
10,177,781	10,360,104	10,523,211
10,180,839	10,362,464	10,523,251
10,181,868	10,367,462	10,530,368
10,193,545	10,374,300	10,536,115
10,200,202	10,389,364	10,542,585
10,205,386	10,389,482	10,547,312
10,218,387	10,396,910	10,551,411



## U.S. PATENT NUMBER

10,566,930	10,739,845	10,827,333
10,574,185	10,740,498	10,827,451
10,581,241	10,742,185	10,831,159
10,587,295	10,742,199	10,833,400
10,594,035	10,742,242	10,833,535
10,595,785	10,742,429	10,833,682
10,601,369	10,742,445	10,833,699
10,601,431	10,754,370	10,833,711
10,608,647	10,754,579	10,833,795
10,608,649	10,756,538	10,833,885
10,637,483	10,756,739	10,834,356
10,651,862	10,756,823	10,840,232
10,658,999	10,757,652	10,840,861
10,659,045	10,763,781	10,840,863
10,659,060	10,763,869	10,840,897
10,667,285	10,769,280	10,840,960
10,673,383	10,771,942	10,848,165
10,673,559	10,778,230	10,859,689
10,673,688	10,784,573	10,860,744
10,678,674	10,785,016	10,863,441
10,680,622	10,788,376	10,868,505
10,681,187	10,789,965	10,893,477
10,681,586	10,805,884	10,908,635
10,693,475	10,809,777	10,911,129
10,693,482	10,812,028	10,911,289
10,698,001	10,812,302	
10,699,995	10,812,350	
10,700,901	10,812,993	
10,707,871	10,816,597	
10,708,780	10,817,200	
10,712,390	10,819,353	
10,715,156	10,819,354	
10,720,948	10,820,270	
10,727,787	10,823,693	
10,727,844	10,826,334	
10,727,845	10,826,501	
10,734,894	10,826,507	
10,734,949	10,826,640	
10,734,977	10,826,647	
10,735,913	10,826,677	