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NAMES OF PATENTEES.

Abstracts marked * will be found in the Addenda.

No.	Year	No.	Year	No.	Year
Abbott, W.	1,937 1878	Anderson, J. E., and Nelson, L. (Paine, H. M., and E. L.)	2,049 1875	Barnes, T. B., and Akester, W. H.	986 1882
Abbott, W., and Field, F.	5,407 1881	Anderson, R. C.	1,824 1880	Barnes, W. C.	2,264 1881
Abdank, B.	339 1882	André, E.	4,053 1877	Barr, F.	455 1881
Abdank, B., and Roosevelt, C.	3,070 1882	André, G. G.	830 1879	Barrier, J. J., and Lavernede, F. T. de	2,425 1882
Abel (Brasseur, L. A., and Dejaer, O.)	4,296 1881	"	5,206 1879	Barrier, J. J., and Vernede, F. T. de la	539 1882
" (Cie. Générale d'Éclairage Electrique)	1,553 1880	"	1,507 1880	Bastet, L.	1,931 1876
" (Jablochhoff, P.)	1,745 1881	"	2,764 1880	Bauer, M., and Co.	1,915 1882
" (Jamin, J. C.)	863 1879	"	2,563 1881	Bear, S. J. M.	3,283 1881
" (Krizik, F., and Piette, L.)	1,397 1880	"	4,654 1881	Beaumont, W. W., and Biggs, C. H. F.	5,198 1881
" (Otto, N. A.)	1,770 1878	André, G. G., and Easton, E.	2,432 1882	Beaumont, W. W., Fitzgerald, D. G., and Biggs, C. H. F.	5,338 1881
" (Sedlacek, H., and Wiknili, F.)	2,322 1879	André, J.	2,833 1881	"	29 1882
" (Tschikoleff, W., and Kleiber, H.)	2,198 1881	Andrews, G.	2,252 1880	Beckingsale, E. W.	1,875 1882
" (Winter, W.)	1,264 1877	Andrews, J. D. F.	292 1878	"	555 1877
Achard, F. A.	1,387 1877	"	416 1879	"	2,512 1882
Achard, F. A.	1,264 1877	"	2,321 1879	"	2,532 1882
Adie, F.	1,387 1877	"	1,526 1881	Bedwell, F. L. B.	367 1876
Akester, W. H.	2,453 1880	"	540 1882	Bell, A. G.	4,341 1877
"	5,211 1880	"	1,324 1882	"	611 1878
"	1,642 1882	"	*3,321 1879	Bell, J.	4,549 1879
"	2,519 1882	Antill, B. H.	1,787 1882	Bell, J., and Scarlett, G.	4,555 1879
"	*4,458 1881	Applegarth (Jablochhoff, P.)	3,552 1876	Bell, T. A.	4,403 1878
Akester, W. H., and Barnes, T. B.	986 1882	Apps, A.	264 1881	Benson, W. A.	4,254 1880
Akester, W. H., and Scott, J.	1,412 1881	Arboast, P., and McTighe, T. J.	3,778 1879	Berjot, A.	4,428 1880
Aklem, F., Kayser, J., Tisdal, A. G., and Marz, E.	351 1880	Arey, A. L.	3,456 1881	Berly, J. A.	1,027 1881
Alamagny, La Société, et Oriol	866 1882	Arnaud, A.	4,074 1878	Berly, J. A., and Hulett, D.	4,755 1880
Alberger, M. H., and Pettit, S. W.	4,601 1878	Aron, H.	2,943 1882	" (Maquere, F. V.)	2,885 1882
Alder, G. E., and Clarke, J. A.	1,442 1878	Aronson, J. N.	359 1882	Bernstein, A.	2,604 1882
Alexander (Bürgin, E.)	3,243 1875	"	2,008 1878	Berthaut, H. M. A.	4,087 1879
" (Lemaire-Douchy, A.)	2,107 1876	Aronson, J. N., and Farnie, H. B.	305 1882	Berthoud, E., and Borel, F.	4,346 1878
" (White, J. C., and Hayden, H. H.)	473 1881	Arras, C. H. O. H. D.	4,163 1878	Berthoud, Borel, et Cie.	4,026 1881
" (Zipernowsky, K.)	1,580 1880	Arthur, W.	1,000 1873	Bertin, E.	4,311 1875
Allen (Knudson, A., and Kane, F. L.)	1,295 1880	Ashworth, E. and G.	2,128 1882	"	5,044 1878
Allen, P. R.	2,215 1881	Asten, J. C.	454 1882	Bertin, E., and Mersanne, F. E. de	5,053 1878
Alliance, Société l. J. Miot	3,743 1877	Atkins, F. H.	2,020 1882	"	5,076 1878
Allison, R., and Hunter, W. J.	2,772 1879	Auberville, Dupont-(Delaye, V.)	566 1873	Biggs, J. H. W.	5,110 1878
Allison, W. C.	2,256 1881	Aubrey, A., Chauvin, F. M.	1,536 1881	Biggs, C. H. F., and Beaumont, W. W.	2,106 1877
Allport, C. J.	493 1882	A., and Goizet, L. H.	2,410 1875	Biggs, C. H. F., Beaumont, W. W., and Fitzgerald, D. G.	5,198 1881
Allport, C. J., and Funshon, R.	2,192 1882	Auriac, A. d'	1,683 1881	"	29 1882
Altenack, F. H. von, and Siemens, W.	2,006 1873	Avenarius, M.	3,025 1880	Biloret, A., and Mora, C.	1,875 1882
Altenack, F. H. von, and Siemens, E. W.	3,134 1878	Aylesbury, H.	4,304 1881	Binswanger, G.	4,049 1880
Altenack, H. von	4,949 1878	Ayrton, W. E.	785 1881	Binswanger, G., and Rhodes, B.	2,390 1882
Altenack, H. von, and F. von	2,652 1879	Ayrton, W. E., and Perry, J.	783 1881	Binko, H.	2,501 1882
Anders, G. L., and Watson, T. A.	1,958 1880	"	2,613 1882	Birkhead, M.	3,073 1882
Anderson, J., and Johnson, W. C.	2,311 1882	"	2,642 1882	Blagburn, C., and Harrison, R.	988 1879
"	"	"	2,830 1882	"	1,358 1881
"	"	Baggeley, H.	3,036 1882	Blake, F.	5,096 1881
"	"	Ball, A., and Ward, D.	166 1877	Blamires, T. H.	455 1880
"	"	Ball, C. E.	2,033 1878	Blandy, A. F.	2,060 1879
"	"	Balukrewicz, T.	84 1882	Blondot, A., and Bourdin, J.	2,629 1879
"	"	Banta, W. E.	2,835 1880	Bloomfield, J. H.	3,679 1879
"	"	Barda, B.	3,043 1882	Blyth, J., and Peebles, D. B.	2,661 1882
"	"	Bardon, L.	1,107 1881	Bodmer, G. R.	4,476 1878
"	"	Barker (Jacques, W. W.)	3,079 1882	Boettcher, E.	144 1882
"	"	Barlow (Meritens, A. de)	3,424 1880	Boggett, W.	2,505 1882
"	"	"	2,212 1881	"	"
"	"	"	4,207 1881	"	"
"	"	"	*1,897 1881	"	"

	No.	Year		No.	Year		No.	Year
Bolton, F. J., and Webber, C. E.	686	1873	Brougham, Hon. R. T. D.	2,044	1882	Chubb, C. J.	761	1882
Bonneville (<i>Chataux, T.</i>)	4,454	1874	Brougham, Hon. R., and Ormiston, F. A.	1,697	1882	Church (<i>King, J. B.</i>)	1,822	1882
" (<i>Daft, L.</i>)	4,775	1881	Brown, A. B.	1,867	1882	Chataux, T.	4,454	1874
" (<i>Radde, W.</i>)	2,091	1873	Brown, A. B., and King, W. F.	5,272	1881	Clamond, C.	2,205	1875
Boothby, A. C., and Siemens, C. W.	696	1881	Brown, A. E.	4,011	1881	Clark (<i>Auriac, A. d'</i>)	1,883	1881
Borel, F., and Berthoud, E.	4,346	1878	Brown, J. W., and Culbertson, J. N.	5,615	1881	" (<i>Bastet, L.</i>)	1,931	1876
Borel, <i>Berthoud et Cie.</i>	4,026	1881	Brown, W. Morgan (See Morgan Brown, W.)			" (<i>Bertin, E.</i>)	4,311	1876
Bossomaier, R., and Schwegler, F.	2,823	1879	Browne (<i>Kimball, D. F.</i>)	3,999	1875	" (<i>Bouteilloux, L. J., and Laing, W.</i>)	842	1880
Boutiguine, N.	1,968	1881	Brownell, H. T.	2,302	1873	" (<i>Bouteilloux, L. J., and Laing, W.</i>)	3,214	1881
Boult (<i>Thomas, J. D.</i>)	1,649	1882	Brush, C. F.	2,003	1878	" (<i>Changy, J. de.</i>)	4,405	1881
" (<i>Thomas, J. W., and Regua, L. F.</i>)	1,336	1882	"	947	1879	" (<i>Clemandot, L.</i>)	4,582	1881
Boulton, W.	805	1877	"	3,750	1879	" (<i>Davis, C.</i>)	4,031	1878
Bourdin, J., and Blondot, A.	2,629	1879	"	849	1880	" (<i>Davis, C. J. P.</i>)	4,407	1878
Bourdin, J., and Maltzoff, S. A. de	1,474	1881	"	1,835	1881	" (<i>Desnos, C. J. P.</i>)	2,340	1879
Bousfield (<i>Smith, H. J.</i>)	380	1874	"	1,834	1881	" (<i>Drew, P.</i>)	2,037	1880
Bousfield, W. R. and E. T.	523	1879	Budenberg (<i>Budenberg, C. F., and Schäffer, B. A.</i>)	4,227	1880	" (<i>Ducretet, E.</i>)	65	1879
Bouteilloux, L. J., and Laing, W.	842	1880	Budenberg, C. F., and Schäffer, B. A.	4,227	1880	" (<i>Fournier, G.</i>)	5,104	1881
"	3,214	1881	Buell, C. E.	5,656	1881	" (<i>Garnier, J.</i>)	4,952	1880
"	4,464	1878	Bulleke, F. B.	4,464	1878	" (<i>Gérard-Lescuyer, (J. M. A.)</i>)	3,697	1879
Bowman, R., and Hawkes, G.	2,402	1881	Bull, H., and Harding, E. J.	2,878	1878	"	1,552	1880
Boys, C. V.	2,449	1881	Bullivant, W. M.	1,159	1874	"	1,685	1881
"	4,472	1881	Bürgin, E.	3,243	1875	"	2,676	1882
"	513	1882	"	5,085	1879	" (<i>Guest, J. H.</i>)	2,980	1880
"	1,946	1882	"	4,819	1881	" (<i>Haddan, W.</i>)	3,843	1879
Boys, C. V., and Liveing, E. H. T.	69	1882	Bureau, A.	1,704	1880	" (<i>Hermann, L. A.</i>)	2,962	1879
Brain, W. B.	5,139	1878	Burrell, S. J.	3,679	1881	" (<i>Hussey, C. A.</i>)	2,043	1875
"	1,548	1882	Busscher, W. de	4,812	1881	" (<i>Kabath, N. de.</i>)	4,037	1881
"	1,616	1882	Byllesby, H. M., and Stern, W. A.	2,336	1882	"	4,060	1881
"	2,659	1882	Byshe, H. C.	4,961	1878	" (<i>Laing, W.</i>)	3,169	1881
Brasseur, L. A., and Dejaer, O.	4,296	1881	Cabanellas, J. E.	200	1881	" (<i>Lamar, J. S.</i>)	4,696	1879
Brasseur, L. A., and Sussex, S. W. M. de	308	1878	Cables Electriques, Société Anonyme des	1,496	1882	" (<i>Lartigue, H.</i>)	3,771	1874
Brear, S., and Hudson, A.	5,032	1881	Cadett, J. W. T.	4,022	1878	" (<i>Lontin, D. F.</i>)	473	1875
Bremner, D.	1,345	1892	"	4,316	1878	"	386	1876
Brewer (<i>Buell, C. E.</i>)	5,656	1881	Callender, W. O.	4,409	1881	" (<i>Lontin & Co.</i>)	2,094	1877
" (<i>Cance, A. J. B.</i>)	4,005	1880	Camacho, J. S.	3,461	1873	" (<i>Marcus, S., and Egger, B.</i>)	2,934	1877
" (<i>Chambrier, E. A.</i>)	4,428	1879	"	3,416	1875	" (<i>Meritens, A. de, & Co.</i>)	2,339	1879
" (<i>Delany, P. B., and Johnson, E. H.</i>)	4,093	1881	Cance, A. J. B.	1,927	1878	" (<i>Muller, H. J., and Levett, A.</i>)	1,787	1881
" (<i>Desguens, A. G.</i>)	3,404	1881	"	4,005	1880	" (<i>Niaudet, A., and Reynier, E.</i>)	3,971	1880
" (<i>Edison, T. A.</i>)	4,592	1878	Capanema, G. S. de	4,171	1873	" (<i>Pilleux, C. L.</i>)	636	1880
"	3,765	1880	Cardew, P.	5,354	1881	" (<i>Planté, G.</i>)	1,713	1873
"	539	1881	Carpentier, J.	4,664	1881	" (<i>Sheridan, H. B.</i>)	4,617	1881
"	768	1881	Carpentier, J., and Deprez, M. O. de	4,128	1881	" (<i>Smith, P. E., Spruiell, S. R., and Wood, W. R.</i>)	931	1882
"	1,240	1881	Carus Wilson, C. A.	5,322	1881	" (<i>Solignac et Cie.</i>)	4,312	1876
"	1,783	1881	"	5,623	1881	" (<i>Reynier, E.</i>)	740	1882
"	1,918	1881	"	5,687	1881	" (<i>Reynier, N. E.</i>)	2,982	1877
"	1,943	1881	"	4,824	1882	" (<i>Reynard, L.</i>)	1,971	1879
"	2,482	1881	"	4,825	1882	" (<i>Rogier, L.</i>)	5,165	1878
"	2,495	1881	Castro, J. W. de	2,954	1882	" (<i>Ward, D., and Ball, A.</i>)	75	1880
"	3,221	1881	Cathcart, C. H.	2,943	1878	Clark, H. A.	2,043	1878
"	3,483	1881	Celrian, J., and Molera, E.	2,068	1882	"	229	1881
"	4,174	1881	Celrian, J. C., and Molera, E. J.	299	1879	"	2,582	1881
"	4,571	1881	Chadburn, W.	1,217	1880	Clark, J.	361	1882
"	4,576	1881	Chambrier, E. A.	2,755	1882	"	3,991	1878
" (<i>Facto, E. E. S.</i>)	3,462	1876	Chameroy, B. H.	4,428	1879	Clark, J. L., and Stanfield, J.	203	1880
" (<i>Johnson, E. H., and Edison, T. A.</i>)	4,821	1880	Changy, J. de	2,295	1882	Clarke, C. L., and Leigh, J.	*4,918	1881
" (<i>Kostoff, S. A.</i>)	2,767	1875	Chaperon, G. (<i>Partly</i>)	4,405	1881	"	245	1881
" (<i>Waterhouse, A. G.</i>)	5,185	1881	Chauvin, F. M. A., Goizet, L. H., and Aubrey, A.	4,582	1881	"	3,652	1881
Brewtinnall, A. W.	5,236	1881	Cheesbrough (<i>Eaton, A. K.</i>)	1,462	1882	Clarke, J. A., and Alder, G. E.	1,483	1882
"	2,934	1882	" (<i>Sawyer, E.</i>)	2,410	1875	Clarke, T., and Smith E.	1,442	1878
Bridges (<i>Heyer, L.</i>)	3,885	1879	" (<i>Sawyer, E., and Man, A.</i>)	751	1880	Clemandot, L.	4,650	1878
Briggs, J. A., and Kinsman, F.	1,774	1882	" (<i>Sawyer, E., and Man, A.</i>)	2,826	1882	Clifford, H.	4,031	1878
Bright, Sir C. T.	4,212	1878	Chertemps, D. A.	3,587	1879	Clingman, T. L.	212	1878
"	3,305	1881	Chichester, S., and Moffatt, R. R.	4,705	1878	Cochrane, A. A.	1,840	1880
"	377	1882	Chinnock, C. E., and Harrison, J. de H.	4,847	1878	Coke, A. L.	4,313	1878
"	2,602	1882	"	3,349	1881	Cohné, S.	1,012	1879
Bright, E. B.	596	1878	Chislett, J. R.	87	1873	"	5,011	1878
Brockie, J.	3,771	1879	Choate, S. F. van	4,388	1878	"	277	1879
"	1,942	1881	Chretien, J., and Felix, C.	2,019	1879	"	2,236	1880
"	4,504	1881	Christensen, F. S., and Reimenschneider, A.	4,693	1878	"	2,369	1881
"	756	1882				"	1,437	1882
"	598	1882				Commelin, E., and Poulet, V.	1,046	1880
"	1,713	1882				Common, A. A.	626	1882
"	2,370	1882				Common, A. A., and Joel, H. F.	1,040	1881
Brooks, D.	4,824	1877				Compagnie Electrique, La	2,990	1882
"	3,254	1881				Concornotti, L.	3,272	1879
Brougham (<i>Sabatou, C.</i>)	469	1880				Connolly, T. A.	3,668	1881
Brougham, Hon. R. T. D.	630	1880				Conradi (<i>André, E.</i>)	4,053	1877
"	832	1880				" (<i>Wiebe, R.</i>)	767	1878
"	1,302	1882				Conybeare, H., and Naphegyi, G.	2,106	1874
"	2,030	1882				Cook, H. C.	2,717	1874
						Cook, H. W.	2,769	1879

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	No.	Year		No.	Year		No.	Year
Cook, H. W.	1,109	1880	Dodd, A. S., and Hussey, C. A.	234	1882	Egger, B., and Marcus, S.	2,934	1877
Cooke, C. W.	1,903	1873	Doibear, A. E.	1,368	1882	Electric Manufacturing Co., Union	392	1882
Corbett, J. L., and Lockhead, W.	219	1880	Donnithorne, T., and Liardet, J. E.	5,216 5,418	1881 1881	Electricité, Société Générale d'	4,066	1878
Cordeaux, J. H.	522	1877	Douchy, A. Lemaire-	120	1882	" " "	1,097	1881
Cougnat, J.	2,000	1879	Dove, J.	2,107	1876	" " "	1,653	1881
Cougnat, J., and Puydt, J. P. C. de	350	1880	Drew, P.	1,158	1879	" " "	2,323	1881
Cour, P. la	1,988	1878	Dubos, C.	2,037	1880	Electricité, Société Générale d', Procédés Jablockhoff	4,496	1881
Courtenay, R. H.	1,450	1873	"	2,401	1878	" " "	1,175	1879
"	1,487	1875	"	427	1879	" " "	725	1880
"	3,543	1879	Ducretet, E.	749	1879	Electricité, Société Universelle d', Tommasi	2,782	1881
"	2,770	1881	"	65	1879	" " "	4,057	1881
"	4,659	1881	Dudley, J. G.	3,423	1881	Electricité, La Cie.	252	1882
"	3,101	1882	Dunlop, J. M., and Hooper, W.	3,997	1873	Electricité, La Cie. Générale d'Eclairage	2,990	1882
Courtenay, R. H., and Moore, S. J.	3,078	1873	Dunstan, R. E., and Pfannkuche, G.	3,655	1881	" " "	1,553	1880
Coxeter, S. J.	492	1878	Dupont-Auberville (V. Delaye)	5,743	1881	Electricques, La Société Anonyme des Câbles, Système Berthoud, Borel et Cie.	4,026	1881
Crandall, J. N., and Fuller, J. B.	3,364 1,557	1875 1876	Dutton (Reese, F.)	1,536	1881	Electricques, Société Anonyme des Câbles	1,496	1882
Crastin, C.	4,771	1881	Duvelius, A. L., Goss, L. W., Higgs, P., Merrell, F. R., Peck, H. D., and Walter H.	51 5,751	1879 1881	Elmore, J.	922	1881
Crichton, C. E.	4,696	1878	Earl, H. D., and Thompson, A. M.	5,281	1878	Elmore, W.	3,565	1879
Crompton, R. E. B.	4,189	1879	Easton, E., and André, G. G.	2,252	1880	"	4,821	1879
"	3,509	1879	Eaton, A. K.	2,833	1881	Elphinstone, Baron, and Vincent, C. W.	3,832	1880
"	5,080	1881	Eclairage Electrique, Cie. Générale d'	751	1880	Elphinstone, Lord (Partly)	2,893	1880
"	346	1882	Edison, T. A.	2,826	1882	Elphinstone, W. B. F.	2,340	1882
"	2,618	1882	Edison, T. A.	1,553	1880	Elwell, P. B., and Parker, T.	2,491	1882
"	2,619	1882	Edison, T. A.	3,762	1875	Emmens, S. H.	2,917	1882
Crompton, R. E. B., and Fitzgerald, D. G.	5,159	1881	Edison, T. A.	4,226	1878	"	2,348	1882
Crompton, R. E. B., and Willans, P. W.	245	1879	Edison, T. A.	4,502	1878	"	2,349	1882
Crookes, W.	1,422	1881	Edison, T. A.	4,502	1878	"	2,912	1882
"	2,612	1881	Edison, T. A.	5,306	1878	"	2,913	1882
"	3,790	1881	Edison, T. A.	2,402	1879	"	2,914	1882
"	2,304	1881	Edison, T. A.	4,576	1879	Emmott, W., Crossley, L. J., and Harrison, J. F.	1,327	1882
"	1,079	1882	Edison, T. A.	5,127	1879	Engel (Frank, G.)	849	1882
Crossley, L. J., Harrison, J. F., and Emmott, W.	1,327	1882	Edison, T. A.	33	1880	" (Müller, C. H. F.)	3,711	1881
Cruto, A.	1,895	1882	Edison, T. A.	578	1880	Epstein, L.	2,807	1882
Cuff, J. C.	2,263	1881	Edison, T. A.	602	1880	Espeut, W. B.	1,257	1881
Culbertson, J. M., and Brown, J. W.	5,615	1881	Edison, T. A.	1,385	1880	Esteve, E.	48	1881
Cumine, J. A.	2,318	1882	Edison, T. A.	3,765	1880	Esteve, E., and Lallement, C.	3,113	1881
Cummings, C.	2,880	1880	Edison, T. A.	3,880	1880	Eustace, M.	1,766	1874
Curtoys, C.	1,851	1882	Edison, T. A.	3,894	1880	"	3,172	1874
Cuttris (Cuttris, C.)	2,135	1882	Edison, T. A.	3,964	1880	Evans, M.	1,970	1873
Cuttris, C. (Partly)	2,135	1882	Edison, T. A.	4,391	1880	"	1,225	1882
"	"	"	Edison, T. A.	539	1881	Ewen, F. W., and James, G. F.	1,719	1875
Daft, L.	4,775	1881	Edison, T. A.	562	1881	"	"	"
Danckwerth, L.	1,704	1876	Edison, T. A.	768	1881	Facio, E. E. S.	3,462	1876
Danckwerth, L., and Sanders, F.	2,016	1879	Edison, T. A.	792	1881	Fahrig, F. E.	4,107	1881
Dandeu, L., and Chertemps, D. A.	1,747	1882	Edison, T. A.	1,016	1881	Fairfax, H., and Darlow, W.	3,736	1873
Darlow, W., and Fairfax, H.	3,736	1873	Edison, T. A.	1,783	1881	Farnie, H. B., and Aronson, J. N.	4,163	1878
D'Arras, C. H. O. H.	1,000	1873	Edison, T. A.	1,802	1881	Farquharson, J.	2,771	1882
Davis (Marz, E., Aklem, F., Kayser, J., and Tisdal, A. G.)	351	1880	Edison, T. A.	1,918	1881	Faucher, F.	2,750	1876
Davis, C.	4,407	1878	Edison, T. A.	1,943	1881	Faulkner, J.	1,800	1875
Davis, C.	4,559	1873	Edison, T. A.	2,482	1881	Faure, C. A.	2,946	1875
Day, M.	1,261	1874	Edison, T. A.	2,492	1881	"	3,670	1876
Debenham, W. E.	3,010	1882	Edison, T. A.	2,495	1881	Faure, C. A.	129	1881
Defries, C.	2,335	1882	Edison, T. A.	2,954	1881	"	1,676	1881
Defly, H.	2,628	1882	Edison, T. A.	3,231	1881	"	4,311	1881
Deiss, A., and Scaife, R.	2,866	1876	Edison, T. A.	3,483	1881	"	730	1882
Dejaer, O., and Brasseur, L. A.	4,296	1881	Edison, T. A.	3,804	1881	"	1,769	1882
Delany, P. B.	1,809	1881	Edison, T. A.	3,932	1881	"	2,019	1879
"	2,217	1881	Edison, T. A.	4,034	1881	Field, F.	2,480	1882
"	333	1882	Edison, T. A.	4,174	1881	Field, F., and Abbott, W.	5,407	1881
Delany, P. B., and Johnson, C. H.	2,532	1881	Edison, T. A.	4,552	1881	Field, F., and Talling, R.	1,938	1875
"	4,093	1881	Edison, T. A.	4,571	1881	Fielding, J.	994	1882
Delaye, V.	1,536	1881	Edison, T. A.	4,576	1881	Finch, G. B.	1,110	1879
Denayrouse, L.	3,170	1877	Edison, T. A.	1,023	1882	Fisher, J., and Gassett, O.	3,768	1881
Denne, T. J. and M. C.	5,404	1880	Edison, T. A.	1,139	1882	Fisher, W.	1,727	1882
Deprez, M., and Carpentier, J.	4,128	1881	Edison, T. A.	1,142	1882	Fitzgerald, D. G.	872	1880
Defring, G. E.	5,123	1878	Edison, T. A.	1,191	1882	"	5,275	1880
Desnos, C. J. P.	2,340	1879	Edison, T. A.	1,496	1882	"	3,890	1881
Despeissis, L. H., and Minchin, G. M.	1,010	1882	Edison, T. A.	1,862	1882	"	5,481	1881
Desquens, A. G.	3,404	1881	Edison, T. A.	2,052	1882	"	2,763	1882
Dessaigne, G.	4,591	1881	Edison, T. A., and Johnson, E. H.	2,072	1882	Fitzgerald, D. G., and Crompton, R. E. B.	5,159	1881
Detrick, C.	3,388	1881	Edmonds (Mowbray, G. M.)	4,621	1880	Fitzgerald, D. G., Biggs, C. H. W., and Beaumont, W. W.	5,338	1881
Dewar, J.	2,886	1876	Edmunds, H., Sellon, J. S., and Ladd, W.	2,437	1881	"	29	1882
Dibbin, H. A.	4,048	1877	Edmunds, H., and Sellon, J. S.	190	1881	Fixsen (Danckwerth, L.)	1,875	1882
Dillon, T. A.	1,207	1879	Edwards, E., and Normandy, A.	4,645	1878	Fleming, J. A.	1,704	1876
"	1,347	1879	Edwards, J., and Leek, E.	1,692	1879	"	1,762	1881
"	3,880	1881	Edwards, J. R.	1,791	1879	"	5,309	1881
Dion, C.	4,265	1880	"	1,949	1879	"	2,414	1882
Dodd, A. S., and Hussey, C. A.	2,375	1881	"	4,611	1878	Fleming, J. A., Ranyard, A. C.	2,807	1881
"	2,572	1881	"	2,640	1873	Fletcher, J. W.	3,936	1880
"	2,573	1881	"	1,720	1880	"	859	1881
"	"	"	"	"	"	Floyd, T., and Kirkland, T.	2,225	1882

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	No.	Year		No.	Year		No.	Year
Floyd, T., and Probert, J.	2,226	1882	Gordon, J. E. H.	76	1881	Hallet, S.	2,573	1882
Fontaine, H.	1,180	1873	"	218	1881	Hallewell, C. E., Milner, W.,		
Fouvielle, W. de	1,339	1880	"	5,536	1881	Griffin, W., and Mori, F.	740	1879
Forbes, G.	4,116	1878	"	2,871	1882	Halske and Siemens	1,447	1881
	1,097	1881	Gore, C. L.	4,797	1881	Hamel, F. J. de	2,543	1879
Force, Société Anonyme la,	1,653	1881	Goss, L. W., Higgs, P., Mer-			Handford (Delany, P. B.)	333	1882
et la Lumière	2,323	1881	rell, F. R., Peck, H. D.,			" (Edison, T. A.)	1,191	1882
	4,496	1881	Waite, H., and Duwelius,			"	1,496	1882
Formby, J.	565	1879	A. L.	5,751	1881	"	1,862	1882
Fottrell, J.	3,086	1873	Gouraud (Delany, P. B., and			"	2,052	1882
Fournier, G.	5,104	1881	Johnson, C. H.)	2,532	1881	"	2,072	1882
Fox, E. M.	4,024	1881	Gower, F. A.	814	1880	"	1,023	1882
	4,383	1881	Graddon, J.	885	1880	"	1,139	1882
Fox, St. G. L.	3,988	1878	Graham, A.	1,171	1882	"	1,142	1882
"	4,043	1878	Graham, D.	3,073	1881	"		
"	4,626	1878	"	3,274	1881	" (Stern, W. A., and		
"	1,122	1879	"	5,618	1881	Byllesby, H. M.)	2,336	1882
"	3,494	1880	Graham, W., and Smith, H. J.	1,392	1882	Harborow, H. A.	3,871	1881
"	225	1881	Gramme, Z. T., and Ivernois,			Harding, E. J., and Bull, H.	2,878	1878
"	1,543	1881	E. L. C. d'	953	1878	Harding, G. P.	4,046	1878
"	1,636	1881	Grant, G., and Sennett, R.	2,267	1879	"	4,047	1878
"	3,122	1881	Gravier, A.	2,739	1881	"	4,590	1879
"	3,394	1881	"	5,295	1881	"	783	1879
"	5,651	1881	"	943	1882	"	4,191	1880
"	1,647	1882	"	1,211	1882	Harding, G. P.	4,192	1880
Franke, G.	849	1882	Gray (Reynier, N. E.)	471	1878	Harling, E. J., and Hart-	3,166	1881
Freeman, J. B. F.	5,307	1878	Gray, M.	3,862	1873	mann, E.	3,472	1881
Freeman, J., and Young, F.	350	1879	"	3,863	1873	Harmant, F.	4,779	1880
Frome, C. H., and Gibbs, G. C.	3,416	1880	"	4,553	1878	Harrington, F. W., Lane,		
Fuller, J. B.	5,183	1878	"	5,056	1879	T. W., and Williams, C.	3,539	1881
Fuller, J. B., and Crandall,	1,557	1876	Gray, M., Goldstone, G., and			Harrison, C. W.	3,623	1876
J. N.	3,364	1875	Radcliffe, J.	3,381	1874	"	3,470	1878
Fuller, J. C. and G.	76	1877	Gray, M., Preece, W. H., Gold-			"	4,338	1878
Furstenburgh (Siemens, L.)	2,199	1879	stone, C., and Radcliffe, J.	3,521	1874	"	3,875	1879
Fyfe, A. L., and Main, J.	3,821	1881	Greb, J. J. C. W.	3,015	1881	"	886	1880
"	2,636	1882	Greening, F.	2,059	1875	"	3,496	1880
Fyfe, J.	774	1881	Greening, F., and Jack, W. F.	718	1879	"	3,559	1881
			Greenwood, H. B., and Varley,			Harrison, J. F., Crossley, L.		
Gadot, P. L. M.	2,344	1881	T.	2,248	1882	J., and Emmott, W.	1,327	1882
Gardner (Roe, E.)	3,010	1881	Grimstone, G. S.	1,670	1881	Harrison, J. de H., and	695	1880
Garnier, J.	4,952	1880	Griscom, W. W.	1,244	1880	Chinnock, C. E.	699	1880
Gary, W. W.	805	1879	"	1,259	1880	Harrison, R.	4,478	1881
"	4,069	1881	"	5,551	1881	Harrison, R., and Blagburn, C.	1,358	1881
"	4,070	1881	Grieve, T. W.	259	1879	"	485	1874
Gassett, O., and Fisher, J.	3,768	1881	Griffin, W., Mori, F., Halle-			Harrop, J. J.	3,793	1879
Gatehouse, T. E.	4,796	1879	well, C., and Milner, W.	740	1879	Hartmann, E., and Harling,	3,472	1881
"	3,240	1881	Groombridge, C.	1,049	1880	E. J.	3,473	1881
"	1,400	1882	Groth (Goebel, H., and Kule-			Harvey, E. W. W., and A.	369	1877
Gatehouse, T. E., and Kempe,			kamp, W. W.)	5,548	1881	Haseltine (Cook, H. C.)	2,717	1874
H. R.	2,569	1882	" (Gülcher, R. J.)	64	1882	Haskins, D. G.	3,016	1878
Gaulard, L., and Gibbs, J. D.	4,942	1881	" (Lachaussee, D.)	2,761	1881	Hatton, R. J., and Young,		
Gaumé, C.	2,618	1873	Grout, G., and Jones, W. H.	5,521	1881	G. S.	1,689	1882
George, A. F. St.	2,193	1878	Guest, J. H.	925	1880	Hatton, R. J., and Paul, A. L.	2,654	1882
"	4,939	1881	Guest, J. H.	2,980	1880	Hawkes, G.	157	1882
George, E., and Morgan, J. B.	4,482	1880	Gülcher, R. J.	2,038	1881	Hawkes, G., and Bowman, R.	2,402	1881
Gerard-Lescuyer, J. M. A.	3,697	1879	"	64	1882	Hayden, H. H., and White,		
"	1,552	1880	Gülcher, R. J.	2,875	1882	J. C.	473	1881
"	1,685	1881	"	3,041	1880	Haymen, H.	959	1879
"	4,792	1881	Gumpel, C. G.	3,324	1880	Heaviside, O.	1,407	1880
"	5,593	1881	"	253	1881	Hedges, K. W.	81	1879
"	5,660	1881	"	2,688	1882	"	925	1879
"	1,878	1882	"	2,723	1882	"	4,988	1880
"	2,144	1882	"	2,756	1882	"	3,369	1881
"	2,676	1882	Gye, F.	4,473	1878	Heinke, F. W.	1,910	1877
"	2,992	1882				"	4,275	1877
Gibbs, G. C., and Frome, C. H.	3,416	1880	Haase, R., and Recker, J. P.	3,832	1881	Heinke, F. W., and Lang, G.	231	1880
Gibbs, J. D., and Gaulard, L.	4,942	1881	Haddan (Boettcher, E.)	144	1882	Heinrichs, C. F.	4,595	1878
Gibbs, R. R.	4,533	1881	" (Brush, C.)	2,003	1878	"	2,317	1879
Gilbert, A., and Wells, G.	1,510	1880	" (Brush, C. F.)	947	1879	"	4,589	1879
"	1,960	1880	"	3,750	1879	"	4,608	1880
Gilbert, A. E.	3,438	1880	"	849	1880	Heins, J.	4,916	1879
"	4,507	1881	"	1,835	1881	Henck, J. B.	4,058	1881
Gimingham, C. H.	2,079	1881	"	1,834	1881	Henley, W. T.	4,115	1875
"	4,193	1881	" (Bureau, A.)	1,704	1880	"	1,944	1876
"	2,375	1882	" (Busscher, W. de)	4,812	1881	"	833	1877
Gloker, J.	2,674	1882	" (Cummings, C.)	2,888	1880	"	5,137	1880
Glouchoff, N.	478	1880	" (Dessaigne, G.)	4,591	1881	"	1,873	1881
Glover, T. G.	855	1877	" (Gülcher, R. J.)	2,038	1881	"	130	1882
Glover, W. T., and James, G. F.	5,237	1880	" (Molera, E., and			"	386	1882
"	913	1881	Celrian, J.)	299	1879	Hequet, T. A.	2,564	1875
Godfrey, W. B.	4,718	1879	" (Morel, A.)	185	1882	Hermann, L. A.	2,982	1879
Goebel, H., and Kulenkamp			" (Rosebrugh, A. N.)	1,476	1879	Herz, C.	93	1881
J. W.	5,548	1881	" (Somzée, L.)	1,852	1881	Herz, L.	3,885	1879
Goizet, L. H., Aubrey, A., and			" (Townsend, J. D.)	4,305	1881	Hibell, W.	4,159	1876
Chauvin, F. M. A.	2,410	1875	" (Weston, E.)	89	1881	Hickison, J.	2,421	1882
Goldstone, G., Radcliffe, J.,			" (Wheeler, W.)	4,280	1876	Hickley, A. S.	3,552	1877
and Gray, M.	3,381	1874	" (Woolley, L. G.)	917	1882	"	4,132	1878
Goldstone, C., Radcliffe, J.,			Haddan, J. L.	3,049	1881	"	4,354	1879
Gray, M., and Preece, W. H.	3,521	1874	Hadden, W.	2,040	1879	Higgins, F. H. W.	4,456	1878
Gollner, D.	131	1878	Hadden, W.	3,843	1879	Higgs, R. F.	4,206	1878
Gordon, J. E. H.	1,826	1880	Hallet, S.	4,017	1881	Higgs, R. W. H. P.	454	1879
"	4,745	1880	"	2,560	1882	Higgs, P.	1,961	1881

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		No.	Year			No.	Year			No.	Year
<i>Higgs, P., Merrell, F. R., Peck, H. D., Walter, H., Duvelius, A. L., and Goss, L. W.</i>		5,751	1881	James, G. F.		1,333	1880	Johnson (<i>Parod, E. W.</i>)		4,508	1881
Highton, H.		1,178	1873	James, G. F., and Ewen, F. W.		1,719	1875	" (<i>Stanford, T. W., and Milligan, S.</i>)		1,563	1880
"		4,277	1873	James, G. F., and Glover, W. T.		5,237	1880	" (<i>Tissandier, G.</i>)		3,401	1881
"		3,006	1874	James, J., and Lee, J. C. F.		913	1881	" (<i>Wheeler, E.</i>)		3,023	1879
Hill, W. S.		3,893	1881	Jameson, J.		2,618	1881	Johnson, E. H.		1,094	1882
Holcombe, A. G.		1,384	1881	"		4,439	1881	Johnson, E. H., and Delany, P. B.		2,532	1881
Holmes, B. G.		920	1879	"		1,670	1882	"		4,093	1881
Hooper, J. P.		2,944	1881	Jamieson, A., and Saunders, H. A. C.		1,416	1877	Johnson, E. H., and Edison, T. A.		4,621	1880
Hooper, W.		3,780	1873	Jamin, J. C.		863	1879	Johnson, J. B.		4,966	1881
Hooper, W., and Dunlop, J. M.		3,997	1873	Jarman, A. J.		563	1882	Johnson, W. C. (<i>Partly</i>)		1,347	1882
Hopkinson, J.		1,959	1879	"		2,565	1882	Johnson, W. C., and Anderson, J.		2,311	1882
"		2,481	1879	"		2,630	1882	Johnson, W. C., and Phillips, E. E.		3,798	1875
"		4,653	1879	Jaspar, J.		83	1879	"		3,533	1876
"		3,509	1880	Jeffery, W.		1,570	1882	"		3,534	1876
"		2,989	1881	Jenkin, F.		1,830	1882	"		2,635	1881
"		3,362	1881	"		3,007	1882	"		4,885	1881
"		49	1882	Jennings, R. S.		1,699	1881	Jones, J. T., and Wild, J. H.		5,614	1881
Hopkinson, J., and Muir-head, A.		4,886	1880	Jensen (<i>Avenarius, M.</i>)		3,025	1880	Jones, W. H., and Grout, G.		5,521	1881
"		153	1881	" (<i>Canoe, A. J. B.</i>)		1,927	1878	Journaux, J. J.		4,518	1881
"		1,577*	1881	" (<i>Edison, T. A.</i>)		3,976	1881	Jousselin, A. L.		2,037	1882
Hosmer, H. G.		311	1878	"		3,880	1880	Judd, W., and Varley, C. F.		441	1882
"		2,930	1878	"		3,894	1880	Jurgensen, C. P., and Lorenz, L. V.		2,416	1881
"		3,676	1878	"		3,964	1880	Justice (<i>Cruto, A.</i>)		1,895	1882
Hosmer, H. G.		4,220	1880	"		4,391	1880	" (<i>Spalding, H. C.</i>)		3,637	1880
Houston, E. J., and Thomson, E.		4,400	1879	"		562	1881	"		65	1881
"		315	1880	"		792	1881	Kabath, N. de		4,037	1881
Howard, C. T.		2,896	1882	"		1,802	1881	Kabath, N. de, and Maikof, A. D.		4,060	1881
Hubble (<i>Gerard-Lescuyer, J. M. A.</i>)		4,792	1881	"		2,492	1881	"		4,271	1881
" (<i>Partz, A. F. W.</i>)		3,455	1881	"		2,954	1881	Kane, F. L., and Knudson, A.		1,295	1880
Hudson, A., and Brear, S.		5,032	1881	"		3,804	1881	Kayser, J., Tidel, A. G., Marz, E., and Aklem, F.		351	1880
Hughes, R. H.		3,190	1881	"		3,932	1881	Keith, N. S.		1,387	1879
Hughes (<i>Wallace, W.</i>)		240	1878	"		4,034	1881	Kelway, C. E.		2,910	1882
Hulett, D., and Berly, J. A.		4,755	1880	"		4,552	1881	Kempe, H. R., and Gatehouse, T. E.		2,599	1882
Humphrys, J.		289	1882	"		4,553	1881	Kendal, R.		4,674	1880
Hunébel, J.		1,856	1881	" (<i>Konn, S. V.</i>)		970	1875	Kennedy, R.		4,541	1881
Hunt (<i>Alberger, M. H., and Pettit, S. W.</i>)		4,601	1878	" (<i>Marcus, S.</i>)		4,006	1878	"		72	1882
" (<i>Brooks, D.</i>)		4,824	1877	" (<i>Prall, W. E., and Obrick, H.</i>)		3,831	1879	"		1,199	1882
" (<i>Brown, A. E.</i>)		4,011	1881	" (<i>Schuyler, D. A., and Waterhouse, F. G.</i>)		3,002	1882	"		1,640	1882
" (<i>Reynoso, A. F. C.</i>)		799	1873	Jeune, A. M. J.		774	1882	"		2,286	1882
Minter, W. J., and Allison, R.		2,772	1879	Joel, H. F.		5,157	1879	"		2,629	1882
Hussey, C. A.		2,043	1875	"		4,607	1881	"		2,527	1877
Hussey, C. A., and Dodd, A. S.		4,265	1880	Joel, H. F., and Common, A. A.		1,040	1881	"		4,825	1880
"		2,375	1881	Johnson (<i>Anders, G. L., and Watson, T. A.</i>)		1,958	1880	"		4,245	1882
"		2,572	1881	" (<i>Bardon, L.</i>)		3,079	1882	"		802	1876
"		2,573	1881	" (<i>Berjot, A.</i>)		4,428	1880	"		3,999	1875
"		234	1882	" (<i>Berthaut, H. M. A.</i>)		4,087	1879	"		2,911	1882
Inray, J.		382	1879	" (<i>Bertin, E., and Mersanne, F. E. de.</i>)		5,076	1878	"		4,456	1879
Inray (<i>Cabanellus, J. E.</i>)		200	1881	" (<i>Camacho, J. S.</i>)		5,110	1878	"		1,184	1880
" (<i>Carpentier, J.</i>)		4,664	1881	" (<i>Faure, C. A.</i>)		3,416	1875	"		1,822	1882
" (<i>Carpentier, C., and Pezzer, O. de.</i>)		5,322	1881	"		129	1881	"		5,272	1881
" (<i>Deprez, M., and Carpentier, J.</i>)		4,128	1881	"		1,676	1881	"		4,684	1881
" (<i>Herz, C.</i>)		93	1881	"		4,311	1881	"		717	1878
" (<i>Jablochkoff, P.</i>)		2,769	1882	" (<i>Fontaine, H.</i>)		1,769	1882	"		2,225	1882
" (<i>La Société Générale d'Electricité</i>)		4,066	1878	" (<i>Fontaine, H., and Gerard-Lescuyer, J. M. A.</i>)		1,180	1873	"		2,198	1881
" (<i>La Société Anonyme des Cables Electriques</i>)		1,496	1882	"		1,878	1882	"		1,295	1880
" (<i>La Société Générale d'Electricité Procédés Jablochkoff</i>)		1,175	1879	" (<i>Gramme, Z. T., and Ivernois, E. L. C. d.</i>)		2,144	1882	"		91	1873
" (<i>McTighe, J. J., and T. J.</i>)		2,744	1882	" (<i>Gower, F. A.</i>)		953	1878	"		970	1875
" (<i>Stearns, J. M.</i>)		5,468	1881	" (<i>Griscom, W. W.</i>)		814	1880	"		441	1875
" (<i>Waters, T. J.</i>)		862	1874	"		1,244	1880	"		2,767	1875
Isaac (<i>Vogel, Sir J.</i>)		3,033	1882	"		1,259	1880	"		3,047	1882
Iverneau, L. E., and Lambert, V. P.		144	1880	"		5,551	1881	"		1,397	1880
Ivernois, E. L. C. d., and Gramme, Z. T.		953	1878	" (<i>Labye, C., and Loch-Labye, L. de.</i>)		5,661	1881	"		2,712	1882
Jablochkoff, P.		836	1876	" (<i>La Cie. Electrique.</i>)		2,990	1882	"		3,837	1878
"		3,552	1876	" (<i>La Société Anonyme la Force et la Lumière, Société Générale d'Electricité</i>)		1,097	1881	"		1,969	1879
"		494	1877	"		1,653	1881	"		4,825	1880
"		1,996	1877	" (<i>La Société l'Alliance, J. Miot</i>)		2,323	1881	"		5,548	1882
"		3,187	1877	" (<i>Meritens, A. de.</i>)		4,496	1881	"		5,661	1881
"		3,839	1877	"		3,743	1877	"		2,761	1881
"		1,745	1881	"		3,658	1878	"		3,666	1875
"		2,769	1882	"		4,690	1878	"		715	1881
Jablochkoff, P.		1,175	1879	"		5,044	1878	"		83	1879
Jablochkoff, La Société Générale d'Electricité		725	1880	"		5,257	1878	"		4,645	1878
Jack, W. F., and Greening, F.		718	1879	"		1,136	1880	"		3,169	1881
Jacobson, L.		3,053	1881	"		5,033	1880	"		842	1880
Jacques, W. W.		3,424	1880	" (<i>Mersanne, F. E. de.</i>)		1,173	1882	"		3,214	1881
James, G. F.		4,261	1874	"		1,446	1874	"		2,256	1881
"		624	1880	" (<i>Mersanne, F. E. de, and Bertin, E.</i>)		2,787	1875	"			
				" (<i>Mignon, J. B. V., and Rouart, S. H.</i>)		3,315	1876	"			
				"		5,053	1878	"			
				"		3,400	1881	"			
				"		3,402	1881	"			

	No.	Year		No.	Year		No.	Year
Lake (Arbogast, P., and Mc-Tighe, T. J.)	3,778	1879	Lake (Weston, E.)	4,748	1877	Lontin and Co.	4,893	1877
" (Arey, A. L.)	3,456	1881	" "	1,163	1882	Looker, P. S., and Leipmann, H.	1,036	1882
" (Ball, C. E.)	84	1882	" "	1,611	1882	Lorenz, L. V., and Jurgen-sen, C. P.	2,416	1881
" (Barda, B.)	1,107	1881	" "	1,614	1882	Loarain (Trouwé, G.)	4,009	1880
" (Barrier, J. J., and Vernelde, F. T. de la)	538	1882	" "	2,694	1882	Lorrain, J. G.	2,848	1881
" (Blake, F.)	5,096	1881	" (Williams, C., Harrington, T. W., and Lane, F. W.)	3,539	1881	" "	5,738	1881
" (Boutguine, N.)	1,968	1881	" (Williams, J. S.)	5,229	1881	Lory, H.	2,409	1882
" (Brooks, D.)	3,254	1881	" "	5,233	1881	Lovel, J. H.	732	1877
" (Brownell, H. T.)	2,302	1873	" "	85	1882	Lucas, F. R.	2,633	1875
" (Castro, J. W. de)	2,943	1878	" "	224	1882	" "	5,270	1878
" (Chinnock, C. E., and Harrison, J. de H.)	695	1880	" (Wood J. J.)	2,851	1881	Ludeke, J. E. F., and Thor-man, A. J.	3,338	1878
" (Clark, H. A.)	229	1881	" "	2,526	1882	Lugo, O.	5,352	1880
" "	2,592	1881	" "	2,531	1882	" "	1,119	1881
" "	361	1882	" "	2,570	1882	" "	1,696	1881
" (Clingman, T. L.)	1,840	1880	" "	2,623	1882	" "	2,394	1881
" (Concornotti, L.)	3,272	1879	" "	2,632	1882	Lumière, Société Anonyme la Force et la	1,653	1881
" (Connolly, T. A.)	3,668	1881	Lalande (Partly G. Chaperon)	1,464	1882	" "	2,323	1881
" (Day, M.)	1,261	1874	Lallement, C. C., and Ètève, C. C.	*3,113	1881	Lumley, E., and Levey, L.	4,496	1881
" (Delany, P. B.)	1,809	1881	Lamar, J. S.	4,696	1879	Lyte, F. M.	1,249	1882
" (Dion, C.)	2,217	1881	Lamb, R. B.	2,665	1880	" "	5,358	1880
" (Duvellius, A. L., Goss, L. W., Higgs, P., Merrell, F. R., Peck, H. D., and Waller, H.)	5,751	1881	Lambert, F.	759	1878	" "	1,363	1882
" (Ètève, E.)	48	1881	Lambert, V. P., and Iverneau, L. E.	144	1880	Macaulay-Cruikshank (Banta, W. E.)	3,048	1882
" (Fuller, J. B.)	5,183	1878	Lande, B.	834	1882	McCarty, W. F. C., and Sel-rière, Baron.	144	1879
" (Fuller, J. B., and Grandall, J. N.)	3,364	1875	" "	838	1882	Macintosh, J.	447	1874
" (Gerard-Lescuyer, J. M. A.)	1,557	1876	Lane, J.	2,752	1882	Mackenzie, J.	4,568	1879
" (Greb, J. J. C. W.)	2,992	1882	Lane, T. W., Williams, C., and Harrington, F. W.	3,539	1881	" "	1,635	1878
" (Haase, R., and Recker, J. P.)	3,015	1881	Lang, G., and Heinke, F. W.	231	1880	Mackenzie, W. J.	95	1882
" (Henck, J. B.)	4,058	1881	Langley, J. W.	4,168	1881	Mackie, A.	14	1882
" (Hill, W. S.)	3,893	1881	Lartigue, H.	3,771	1874	Mackie, M. W. W., and Wright, F.	1,029	1882
" (Holcombe, A. G.)	1,384	1881	Laurie, A. P.	2,823	1881	" "	1,031	1882
" (Houston, E. J., and Thomson, E.)	4,400	1879	Lavernède, F. T. de, and Barrier, J. J.	4,310	1818	Mackie, S. J.	1,274	1882
" (Hussey, C. A., and Dodd, A. S.)	315	1880	Law, H.	538	1882	" "	440	1874
" (Johnson, J. B.)	4,265	1880	Laybourne, R.	4,851	1880	McTighe, J. J.	2,542	1881
" (Johnson, J. J.)	234	1882	Laycock, W. S.	5,316	1881	McTighe, J. J., and T. J.	162	1878
" (Keith, N. S.)	4,966	1881	Lea, J.	478	1875	McTighe, T. J., and Arbo-gast, P.	2,744	1882
" (Khotinsky, A. de)	4,518	1881	Lea, H.	1,919	1882	" "	3,778	1879
" (Krizik, F., and Piette, L.)	1,887	1879	Leask, A. R.	2,186	1882	Maden, E.	1,412	1876
" "	245	1882	Leask, A. R., and Smith, F. P.	1,803	1882	Madsen, C. L.	4,167	1873
" (Lamb, R. B.)	2,712	1882	Lebrun, E., and Lemaire, A.	3,099	1882	Maikoff, A. D., and Kabath, M. de.	4,271	1881
" (Lande, B.)	2,665	1880	Lee, J. C. F., and James, J.	4,081	1880	Main, J., and Fyfe, A. L.	3,821	1881
" "	834	1882	Leek, E., and Edwards, J.	4,396	1881	Maltzoff, S. A. de, and Bour-din, J.	2,636	1882
" "	838	1882	Leigh, J., and Clark, C. L.	2,640	1878	" "	1,474	1881
" (La Société Universelle d'Electricité Tommasi)	252	1882	" "	245	1881	Man, A., and Sawyer, E.	1,474	1881
" (Lemaire, L., and Lebrun, E.)	4,081	1880	Leipmann, H., and Looker, P. S.	1,483	1882	" "	4,705	1878
" (Lemange, L.)	3,211	1881	Lemaigne, A., and Lebrun, E.	1,036	1882	Mandon, J. A.	4,847	1878
" (Levy, M.)	542	1882	Lemaigne, A., and Lebrun, E.	4,081	1880	" "	2,147	1880
" (Lory, H.)	2,409	1882	Lemaigne, L. S., Mangin and Co.	2,107	1876	Mangin, Lemonnier, and Co.	4,914	1880
" (McTighe, J. J.)	162	1878	Lescuyer, J. M. A. Gerard- (See Gerard-Lescuyer, J. M. A.)	3,425	1879	Manly, R. P. and M. M., and Philips, W. J.	3,425	1879
" (Maikoff, A. D., and Kabath, M. de)	4,271	1881	Letrange, L.	3,425	1879	Maguire, F. V.	1,475	1880
" (Marchese, E.)	1,884	1882	Lever, C.	3,211	1881	Marchese, E.	2,885	1882
" (Maxim, H. S.)	1,392	1880	Levit, A., and Muller, H. J.	3,599	1881	Marchese, E.	1,884	1882
" "	1,649	1880	Levy, L., and Lumley, E.	2,092	1882	Marcus, S.	4,006	1878
" "	4,393	1880	Levy, M.	1,787	1881	Marcus, S., and Egger, B.	2,934	1877
" "	4,866	1880	Lewis, J. S.	1,249	1882	Marx, E., Aklem, F. Kayser, J., and Tiedel, A. G.	351	1880
" "	639	1881	Liardet, J. E., and Donni-thorne, T.	542	1882	Maslin, T.	792	1875
" "	3,189	1881	Limbeck, W. S.	1,017	1882	Massey, J. E.	3,412	1876
" "	5,367	1881	Linford, C.	5,216	1881	Masson, A.	2,013	1881
" "	1,162	1882	Little, G.	5,418	1881	Mathieson, J.	2,734	1882
" "	1,619	1882	Liveing, E. H. T.	5,418	1881	Matthews, R.	1,201	1882
" (Moffatt, R. R.)	2,759	1882	Liveing, E. H. T., and Boys, C. V.	120	1882	Maxim, H. S.	1,392	1880
" (Molera, E. J., and Celrian, J. C.)	1,217	1880	Locht-Labye, L. de, and Labye, C.	4,408	1880	" "	1,649	1880
" (Mondos, J. A.)	5,490	1881	Lockhead W., and Corbett, J. L.	4,456	1879	" "	4,393	1880
" (Nichols, J. V.)	4,495	1880	Lockwood, W. V. O. and R. M.	1,184	1880	" "	4,866	1880
" (Pope, F. L.)	3,187	1881	Loeffler, J. C. L.	497	1882	" "	639	1881
" (Fuvillard, J., and Raphael, T.)	2,656	1873	Longsdon (Krupp, A.)	4,833	1880	" "	3,189	1881
" (Richards, J. G.)	2,111	1879	Lontin, D. F.	69	1882	" "	5,367	1881
" (Roche, C. F. de la)	2,760	1882	Lontin and Co.	5,661	1881	" "	1,162	1882
" (Rysselberge, F. v.)	5,477	1881	Lockhead W., and Corbett, J. L.	219	1880	" "	1,619	1882
" (Seeley, C. A.)	2,781	1882	Lockwood, W. V. O. and R. M.	2,398	1881	Maxwell-Lyte, F. (See Lyte, F. M.)	3,177	1881
" (Splitdorf, H.)	2,904	1882	Lodighin, A. N.	91	1873	Mayal, T. J.	4,699	1878
" (Strohm, S. D.)	*1,272	1881	Loeffler, J. C. L.	905	1880	Melhado, A.	4,705	1876
" (Tenac, C. L. Van)	3,790	1881	Longsdon (Krupp, A.)	3,887	1878	Menier, H.	756	1880
" (Thompson, E.)	4,206	1875	Lontin, D. F.	1,969	1879	Mercadier, E. J. P.	3,929	1881
" (Watson, E. B.)	3,928	1880	" "	473	1875	Meredith, R. T. and W. J.	4,707	1878
" "	389	1879	" "	386	1876	Meritens, A. de	3,658	1878
" "			" "	3,264	1876	" "	4,690	1878
" "			" "	2,094	1877	" "	5,257	1875
" "			" "			" "	178	1879

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	No.	Year		No.	Year		No.	Year
<i>Meritens, A. de</i>	2,339	1879	<i>Muirhead (Briggs, J. A., and Rinsman, F.)</i>	1,774	1882	<i>Pass (La Société Anonyme des Câbles Electriques, Systeme Berthoud, Borel, et Cie.)</i>	4,026	1881
"	1,136	1880	<i>Muirhead, A.</i>	2,606	1881	" (Roosevelt, C., and Abdank, B.)	3,070	1882
"	5,033	1880	"	2,658	1882	<i>Paul, A. L., and Hatton, R. J.</i>	2,654	1882
"	2,212	1881	<i>Muirhead, A., and Hopkinson, J.</i>	4,886	1880	<i>Peck, H. D., Walter, H., Duvelius, A. L., Goss, L. W., Higgs, P., Merrell, F. R.</i>	5,751	1881
"	4,207	1881	"	153	1881	<i>Peebles, D. B., and Blyth, J.</i>	2,661	1882
<i>Mersanne, F. E. de</i>	1,173	1882	"	1,577	1881	<i>Pel, J. A.</i>	3,580	1881
"	2,787	1875	<i>Müller, C. H. F.</i>	3,711	1881	<i>Perry, J.</i>	1,178	1880
"	3,315	1876	<i>Müller, H. J., and Levett, A.</i>	1,787	1881	"	55	1882
"	6,060	1878	<i>Munro, J.</i>	4,016	1878	<i>Perry, J., and Ayrton, W. E.</i>	783	1881
"	5,044	1878	"	1,626	1882	"	2,613	1882
<i>Mersanne, F. E. de, and Bertin, E.</i>	5,053	1878	<i>Naphegyi, G., and Conybeare, H.</i>	2,106	1874	"	2,642	1882
"	5,076	1878	<i>Nawrocki (Balnkiewicz, T.)</i>	2,835	1880	"	2,830	1882
"	5,110	1878	" (Limbeck, W. S.)	4,408	1880	"	3,036	1882
<i>Merrell, F. R., Peck, H. D., Walter, H., Duvelius, A. L., Goss, L. W., Higgs, P.</i>	5,751	1881	<i>Neale, N. T.</i>	902	1878	<i>Pettit, S. W., and Alberger, M. H.</i>	4,601	1878
<i>Mewburn (Achar, F. A.)</i>	2,453	1880	<i>Neave, S. J.</i>	4,475	1874	<i>Pezzar, O. de, and Carpentier, C.</i>	5,322	1881
" (Bourdin, J., and Maltzof, S. A. de)	1,474	1881	<i>Neill, A. O.</i>	4,380	1876	<i>Pfannkuche, A.</i>	2,845	1882
" (Fonvielle, W. de)	1,339	1880	<i>Nelson, L., and Anderson, J. E. (Paine, H. M. and E. L.)</i>	2,049	1875	<i>Pfannkuche, G., and Dunstan, R. E.</i>	3,655	1881
" (Heins, J.)	4,916	1879	<i>Nelson, L., and Paine, E. L. (Paine, H. M.)</i>	4,118	1875	<i>Phillips, E. F.</i>	3,603	1878
" (Jeune, A. M. J.)	774	1882	<i>Nettlefold, J. H.</i>	2,962	1878	"	3,798	1875
" (La Société Alalmagny et Oriel)	866	1882	<i>Newton (Camacho, J. S.)</i>	3,461	1873	<i>Phillips, S. E., and Johnson, W. E.</i>	3,533	1876
" (Nitz, M. C. F.)	153	1879	" (Cook, H. W.)	2,769	1879	"	2,636	1881
" (Putnam, T. A. B.)	1,125	1880	" (Gravier, A.)	2,739	1881	"	4,885	1881
" (Rigaud, F.)	3,054	1882	" (Gravier, A. J.)	5,295	1881	<i>Phillips, S. E. (Partly Johnson, W. C.)</i>	1,347	1882
" (Weiller, L.)	1,821	1882	"	943	1882	<i>Phillips, S. E., and Phillips, W. A.</i>	2,571	1882
<i>Meyer, H. R.</i>	232	1882	" (Hosmer, H. G.)	1,211	1882	<i>Philips, W. J., and Manly, M. M. and R. P.</i>	1,475	1880
<i>Mignon, J. B. V., and Rouart, S. H.</i>	3,400	1881	"	311	1878	<i>Pickersgill, G.</i>	1,693	1877
<i>Millar, A.</i>	3,402	1881	"	2,930	1878	"	3,854	1877
"	4,592	1881	"	3,676	1878	<i>Pierson, J. S.</i>	5,321	1878
"	5,566	1881	" (Hussey, C. A., and Dodd, A. M.)	2,375	1881	<i>Piette, L., and Krizik, F.</i>	1,397	1880
"	2,138	1882	" (Menier, H.)	4,705	1876	"	2,712	1882
<i>Miligan, S., and Stanford, T. W.</i>	1,563	1880	" (Mersanne, F. E. de) (Société Universelle d'Electricité Tommasi)	5,060	1878	<i>Pilleuz, C. L.</i>	636	1880
<i>Milton, F.</i>	3,085	1879	" (Stone, J. B.)	94	1874	<i>Pilsen</i>	1,397	1880
"	2,788	1881	" (Tommasi, F.)	4,405	1879	<i>Piot, D. T.</i>	2,712	1882
<i>Mills (Million, F.)</i>	3,085	1879	" (Volckmar, E.)	5,261	1881	<i>Pitkin, J.</i>	4,851	1881
" (Thomas, W. M.)	2,788	1881	" (Wallace, J. D.)	2,015	1873	"	1,692	1882
<i>Milner, W., Griffin, W., Mori, F., and Hallowell, C. E.</i>	740	1879	" (Weston Dynamo-Electric Machine Co.)	4,860	1878	<i>Pitt (Bear, S. J. M.)</i>	5,451	1881
<i>Minchin, G. M., and Despeissis, J. H.</i>	1,010	1882	<i>Newton, F. M.</i>	4,569	1881	" (Burrell, S. J.)	3,283	1881
<i>Mot, J., Société l'Alliance</i>	3,743	1877	<i>Newton, H. R.</i>	1,569	1876	" (Espeut, W. B.)	3,679	1881
<i>Moffatt, R. R.</i>	2,759	1882	<i>Nezeraux, C. P.</i>	3,039	1882	" (Gaulard, L., and Gibbs, J. D.)	1,257	1881
<i>Moffatt, A., and Richardson, T. H.</i>	3,085	1875	<i>Niaudet, A., and Reyner, E.</i>	3,971	1880	" (Lugo, O.)	4,942	1881
<i>Moffatt, R. R., and Chester, S.</i>	3,441	1881	<i>Nichols, J. V.</i>	4,495	1880	"	5,352	1880
<i>Molera, E., and Celrian, J.</i>	299	1879	"	3,187	1881	"	1,119	1881
<i>Molera, E. J., and Celrian, J. C.</i>	1,217	1880	<i>Nitz, M. C. F.</i>	153	1879	"	1,696	1881
<i>Molloy, G.</i>	1,455	1882	<i>Normandy, A., and Edwards, E.</i>	4,611	1878	" (Mangin, Lemonnier, and Co.)	3,425	1879
<i>Monckton, E. H. C.</i>	265	1874	"	4,041	1878	" (Scribner, C. E.)	5,156	1879
"	3,509	1874	<i>North, W.</i>	4,518	1878	" (Starr, E. T.)	5,600	1881
"	4,597	1876	<i>Nothomb, L.</i>	2,452	1882	<i>Planté, G.</i>	819	1882
<i>Mondos, J. A.</i>	5,490	1881	<i>Obach, E. A.</i>	3,317	1878	"	1,713	1873
<i>Moore, S. J., and Courtenay, R. H.</i>	3,078	1873	<i>Obrick, H., and Prall, W. E.</i>	3,831	1879	<i>Pope, F. L.</i>	2,656	1873
<i>Moore, W. E., and Prosser, W.</i>	2,585	1877	"	4,380	1876	<i>Portier, P. A.</i>	3,355	1879
<i>Mora, C., and Biloret, A.</i>	4,049	1880	<i>O'Neill, A.</i>	1,248	1878	<i>Poulet, V., and Commelin.</i>	1,046	1880
<i>Moré, A.</i>	185	1882	<i>Oppenheimer, J.</i>	866	1882	<i>Powell, C. E.</i>	4,435	1874
<i>Morgan, J. B., and George, E.</i>	4,482	1880	<i>Oriel, La Société Alalmagny et Ormiston, F. A., and Wright, F.</i>	5,006	1881	<i>Powell, L. A. (Gerard-Lescuyer, J. M. A.)</i>	5,693	1881
<i>Morgan, T. (Glouchoff, N.)</i>	473	1880	<i>Ormiston, F. A., and Brougham, Hon. H.</i>	1,697	1882	<i>Prall, W. E.</i>	979	1874
<i>Morgan-Brown (Fox, E. M.)</i>	4,024	1881	<i>Otto, N. A.</i>	1,770	1878	<i>Prall, W. E., and Obrick, H.</i>	3,831	1879
" (Gassett, O.)			<i>Owen, C.</i>	534	1873	<i>Preece, W. H. Goldstone, C., Radcliffe, J., Gray, M.</i>	3,521	1874
" (and Fisher, J.)	3,768	1881	<i>Page, G. S.</i>	2,516	1882	<i>Preece, W. H., and James, J.</i>	129	1882
" (Harding, G. P.)	3,166	1881	"	2,518	1882	<i>Prentice, E. R.</i>	4,777	1881
" (Haskins, D. G.)	3,016	1878	<i>Paine, H. M.</i>	4,118	1875	<i>Price, A. P.</i>	2,722	1882
" (McCarty, W. F. C., and Selhère, Baron)	144	1879	<i>Paine, H. M., and E. L.</i>	2,049	1875	<i>Pritchard, G. E.</i>	2,816	1873
" (Portier, P. A.)	3,355	1879	<i>Paine, E. L. and Nelson, L. (Paine, H. M.)</i>	4,118	1875	<i>Pritchard, O. G.</i>	2,974	1882
<i>Mori, F., Hallowell, C. E., Milner, W., and Griffin, W.</i>	740	1879	<i>Palmer (Gaumé, C.)</i>	2,618	1873	<i>Probert, J., and Floyd, T.</i>	2,226	1882
<i>Moritz, P.</i>	4,636	1876	<i>Paraire, E. L.</i>	325	1879	<i>Prosser, W.</i>	3,466	1875
<i>Moseley, W.</i>	2,969	1873	<i>Parker, T., and Elwell, P. B.</i>	2,917	1882	<i>Protheroe, P.</i>	2,585	1877
"	307	1879	<i>Parod, E. N.</i>	4,686	1878	<i>Pulvermacher, I. L.</i>	2,725	1876
"	3,001	1879	<i>Parod, E. W.</i>	4,508	1881	"	1,900	1876
<i>Mourlot, E.</i>	4,846	1879	<i>Partz, A. F. W.</i>	3,455	1881	"	3,782	1876
"	2,121	1880	<i>Pass (Abdank, B.)</i>	339	1882	"	3,469	1877
<i>Moubray, G. M.</i>	2,437	1881	" (Gloker, J.)	2,674	1882	"	1,587	1878
"	190	1881				"	4,079	1878
<i>Mucklow, J. D., and Spurge J. B.</i>	5,368	1881						

	No.	Year		No.	Year		No.	Year
Pulvermacher, I. L.	4,094	1878	Rowan, T.	5,400	1881	Siemens, C. W., and Boothby,		
"	4,180	1878	Rowett, W.	2,077	1873	A. C.	696	1881
"	4,774	1878	Rubery, J.	4,079	1873	Siemens, E. W.	583	1880
"	4,844	1878	"	4,193	1873	"	760	1882
"	837	1882	"	2,759	1876	Siemens, W., and Alteneck,		
Punshon, R.	5,105	1878	Russell, W. J., and Wilson,			F. H. von	2,006	1873
Punshon, R., and Allport, C.			R.	687	1877	Siemens, E. W., and Alte-		
J.	4,850	1881	Ryselberghe, F. van	2,484	1881	neck, F. H. von	3,134	1878
Punshon, R., and Shippey, A.	2,293	1882	"	2,804	1882	Siemens, L.	2,199	1879
Putnam, T. A. B.	2,711	1881	"			Simon (Schuckert, S.)	4,464	1877
Putnam, T. A. B.	1,125	1880	Sabatou, C.	469	1880	"	960	1879
Puvilland, J., and Raphael,			Sabine, R.	4,821	1878	Slater, T.	2,625	1874
T.	2,111	1879	Sachs, J. J.	894	1881	"	2,272	1880
Puydt, J. P. C. de, and J.			Salomons, Sir D.	1,580	1882	Smillie, R. D.	1,850	1882
Cougnet	350	1880	Sanders, F., and Danckwerth,			Smith, A.	1,465	1882
"			L.	2,016	1879	Smith, E., and Clarke, T.	4,650	1878
Quin, E.	1,239	1880	Saunders, H. A. C., and			Smith, F. P., and Leask, A.		
"			Jamieson, A.	1,416	1877	R.	3,099	1882
Radcliffe, J., Goldstone, G.,			Sawiczski, S. von	3,464	1881	Smith, G.	1,132	1882
and Gray, M.	3,381	1874	Sawyer, E.	3,587	1879	Smith, H. J.	380	1874
Radcliffe, J., Gray, M., Preece,			"	4,705	1878	Smith, H. J., and Graham,		
W. H., Goldstone, C.	3,521	1874	Sawyer, E., and Man, A.	4,847	1878	W.	1,392	1882
Radde, W.	2,091	1873	Scaife, R., and Deiss, A.	2,366	1876	Smith, J. W.	3,975	1881
Raison, H. S.	169	1882	Scantlebury, W.	1,932	1878	Smith, M. H.	3,981	1877
Ranyard, A. C., and Fleming,			Scarlett, G.	1,585	1880	Smith, P. E., Spruill, S. R.,		
J. A.	2,807	1881	Scarlett, G., and Bell, J.	4,555	1879	and Wood, W. R.	4,312	1876
Raphael, T., and Puvilland,			Schäfer, B. A., and Buden-			Smith, W.	4,384	1875
J.	2,111	1879	berg, C. F.	4,227	1880	"	4,322	1878
Rapieff, J.	831	1882	Schaeffer, A. G.	4,294	1881	"	5,599	1881
"	4,432	1877	Schuckert, S.	4,464	1877	Société Alamagny et Oriol	876	1882
"	2,136	1882	"	960	1879	Société Anonyme des Câbles		
"	211	1879	Schumann, O.	2,179	1880	Electriques	1,496	1882
Rath, A. W.	2,658	1881	Schuyler, D. A., and Water-			Société Anonyme la Force et	1,097	1881
Raworth, B. A.	27	1879	house, F. G.	3,002	1882	La Lumière, Société Géné-	1,653	1881
Rawson, F. L., and Wood-			Schwegler, F., and Bosso-			rale d'Electricité	2,323	1881
house, O. E.	1,412	1882	maier, R.	2,823	1879	"	4,496	1881
Recker, J. P., and Haase,			Scott, J., and Akester, W.			Société Générale d'Electricité	4,066	1878
R.	3,832	1881	H.	1,412	1881	Société Générale d'Electricité	1,175	1879
Reddie (André, J.)	5,268	1880	Scott (Strickler, W.)	3,099	1876	Procédés Jablockhoff	725	1880
" (Biloret, A., and Mora,			Scott, T. F.	861	1878	Société l'Alliance, J. Miot	3,743	1877
C.)	4,049	1880	Scott, W.	4,140	1878	Société Universelle d'Elec-	2,782	1881
" (Cheremys, D. A.)	3,349	1881	Scott, W. L.	4,671	1878	tricité, Tommasi	4,057	1881
" (Hunelle, J.)	1,856	1881	Scribner, C. E.	5,156	1879	"	252	1882
" (Menier, H.)	756	1880	Sears, J. N., and White, W.			Solignac et Cie	740	1882
" (Sedlacek, H., and			G.	347	1880	Somzée, L.	1,852	1881
Wiknill, F.)	1,596	1881	Sedlacek, H., and Wiknill,	2,322	1879	"	4,305	1881
" (Volckmar, E.)	4,398	1881	F.	1,596	1881	Sorley, C.	2,945	1882
Redfern (Bloomfield, J. H.)	3,679	1879	Seeley, C. A.	1,998	1880	Spagnoletti, C. E.	869	1882
Reese, F.	51	1879	Sellière, Baron, and Mc-			Spalding, H. C.	915	1878
Reimenschneider, A., and			Carty, W. F. C.	144	1879	"	1,195	1878
Christensen, F. S.	4,693	1878	Sellon, J. S.	3,926	1881	"	1,196	1878
Remington, G.	192	1879	"	3,987	1881	"	1,197	1878
Requa, L. F., and Thomas, J.			"	4,005	1881	"	1,467	1878
W.	1,336	1882	"	4,632	1881	Spalding, H. C.	3,637	1880
Reynard, L.	5,165	1878	"	5,631	1881	"	65	1881
Reynier, E.	2,399	1878	"	5,632	1881	Sparling, J. A.	*2,414	1881
"	2,982	1877	"	319	1882	Specht (Schumann, O.)	2,179	1880
Reynier, E., and Niaudet, A.	3,971	1880	"	2,818	1882	Spence (Kotyra, M.)	3,047	1882
Reynier, N. E.	471	1878	Sellon, J. S., Ladd, W., and	4,645	1878	Spence, J. B.	876	1879
"	1,971	1879	Edmunds, H.	4,646	1878	"	2,706	1879
Reynolds, W. F.	515	1874	Sellon, J. S., and Edmunds, H.	1,692	1879	Sperry, E. A.	3,025	1882
Reynoso, A. F. C.	799	1873	"	1,791	1879	Spittdorf, H.	*1,272	1881
Rhodes, B., and Bingswanger,			"	1,949	1879	Sprague, J. T.	1,558	1873
G.	2,501	1882	Sennett, A. R.	5,286	1881	"	4,662	1878
Richards, J. G.	2,760	1882	Sennett, R., and Grant, G.	2,267	1879	"	4,762	1878
Richardson, J.	288	1881	Shea, C. E.	4,304	1878	"	4,454	1881
"	2,703	1881	Shedlock, J. J.	5,498	1880	"	4,902	1882
"	5,681	1881	Sheldon, J.	2,397	1879	Spruill, S. R., Wood, W. R.,		
"	941	1882	Sheridan, H. B.	4,617	1881	Smith, P. E.	4,312	1876
Richardson, G.	2,644	1882	"	931	1882	Spurge, J. B., and Mucklow,		
Richardson, T. H., and Moffatt,			Shippey, A.	879	1881	J. D.	5,378	1881
A.	3,085	1875	Shippey, A., and Punshon,			Stanfield, J., and Clark, J.		
Ridout, R. H.	3,003	1876	R.	2,293	1882	L.	*4,918	1881
Rigaud, F.	3,054	1882	Siemens (Alteneck, H. von	4,949	1878	Stanford (Phillips, E. F.)	3,603	1878
Roche, C. F. de la	5,477	1881	" (Von Alteneck, F.			Stanford, T. W., and Milli-		
"	2,781	1882	and H.)	2,652	1879	gan, S.	1,563	1880
Roe, E.	3,010	1881	" (Siemens and Halske)	1,447	1881	Stanley, W.	2,660	1882
Rogers, J. B.	3,809	1880	" (Siemens, E. W.)	760	1882	Starr, E. T.	5,601	1881
"	1,922	1881	" (Siemens, W., and			"	819	1882
"	4,854	1881	Alteneck, F. H.			Stearn, C. H.	*5,000	1881
"	4,855	1881	von)	2,006	1873	Stearns, J. B.	2,870	1873
"	621	1882	" (Siemens, E. W., and			Stearns, J. M.	5,468	1881
"	1,288	1882	Alteneck, F. H.			Stern, W. A., and Byllesby,		
"	1,390	1882	"	3,134	1878	H. M.	2,336	1882
"	1,618	1882	" (Siemens, E. W.)	583	1880	Sterne, L.	3,974	1874
"	1,760	1882	" and Halske	1,447	1881	Stewart, C.	4,466	1878
"	1,760	1882	Siemens, C. W.	251	1878	Stockman, B. P.	4,315	1878
"	1,999	1882	"	2,281	1878	Stokes, J. E.	4,283	1878
"	75	1880	"	3,315	1878	Stone, J. E.	94	1874
Roguer, L.			"	4,208	1878	Strickler, W.	3,089	1876
Roosevelt, C., and Abdank,			"	2,110	1879	Strohm, S. D.	3,790	1881
B.	3,070	1882	"	4,534	1879	Stuart, J. M.	2,232	1882
Rosebrugh, A. M.	1,478	1879	"	4,614	1880	"	2,233	1882
Rouart, S. H., and Mignon,	3,400	1881						
J. B. V.	3,402	1881						

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	No.	Year		No.	Year		No.	Year
Stuart-Wortley, A. H. P.	3,656	1873	Varley, F. H.	2,776	1882	Weyde, H. V.	446	1878
Swalwell, J.	2,456	1882	Varley, F. H. and C. F.	5,396	1881	Weyde, H. S. V.	508	1879
Swan, A.	2,898	1880	Varley, S. A.	4,905	1876	Wheeler, E.	3,023	1874
Swan, J. W.	18	1880	"	4,435	1877	Wheeler, J. J.	1,652	1882
"	250	1880	"	5,665	1881	Wheeler, W.	3,858	1881
"	4,933	1880	"	5,667	1881	"	3,911	1881
"	5,004	1880	Varley, T., and Greenwood,			"	917	1882
"	5,014	1880	H. B.	2,248	1882	White, J. C., and Hayden,		
"	2,272	1881	Vermede, F. T. de la, and	538	1882	H. H.	473	1881
"	4,202	1881	Barrier, J. J.	2,425	1882	White, W. G., and Sears, J.		
"	4,455	1881	Verruc, F.	4,287	1878	N.	347	1880
"	5,494	1881	Vincent, C. W. and Elphin-	332	1879	Whiteley, J.	1,445	1879
"	5,499	1881	stone, Baron.	2,393	1880	Whitehouse, E. O. W.	1,820	1874
"	5,702	1882	Vincent (Elphinstone, W. B.			Whiteman (Bauer, M., and		
"	905	1882	F.)	2,491	1882	Co.	1,915	1882
Sussex, S. W. M. de	465	1879	"	684	1879	Whyte, G. W.	5,152	1878
Sussex, S. W. M. de, and			"	2,557	1882	Whyte, G.	2,744	1879
Brasseur, L. A.	308	1878	Vincent (Elphinstone, Lord,			Wiede, R.	767	1878
Sueur, C. le	3,857	1881	Partly)	2,340	1882	Wier, M. A.	806	1875
Talling, R., and Field, F.	1,938	1875	Voeux (Bernstein, A.)	2,604	1882	"	2,686	1882
Tambourin, G. A.	1,235	1881	Vogel (Vogel, N. C.)	4,812	1878	Wigham, J. R.	*2,564	1881
Tenac, C. L. van	4,206	1875	Vogel, N. C.	4,812	1878	Wigner, G. W.	553	1880
Thomas J. D.	1,649	1882	Vogel, Sir J.	3,033	1882	Wikull, F., and Sedlaczek,	2,322	1879
Thomas, J. W., and Requa,			Voice, E. L.	1,794	1882	H.	1,596	1881
L. F.	1,326	1882	Volckmar, E.	2,288	1882	Wild, J. H., and Jones, J. T.	5,614	1881
Thomas, W. M.	578	1882	"	4,393	1881	Wilde, H.	618	1873
Thompson (Gary, W. W.)	805	1879	Volk, M.	5,261	1881	"	1,554	1874
"	4,069	1881	Vyle, S.	2,962	1882	"	1,228	1878
"	4,070	1881	Walker	5,002	1881	"	3,250	1878
" (Langley, J. W.)	4,168	1881	Wallace, J. D.	293	1874	"	5,197	1878
" (Pel, J. A.)	3,390	1881	Wallace, W.	2,015	1873	"	5,008	1880
" (Reymier, E.)	2,399	1878	Waller, R.	240	1878	"	497	1881
" (Ryselberghe, F. van)	2,484	1881	Walter, H., Duvelius, A. L.,	803	1881	Wiles, J. F.	2,256	1882
" (Union Electric Manufacturing Co.)	392	1882	Goss, L. W., Higgs, P.,			"	65	1873
Thompson, A. M., and Earl,			Merrell, F. R., Peck, H.	5,751	1881	"	644	1879
H. D.	5,281	1878	Ward, E. P.	2,930	1881	Wilkins, T.	4,306	1879
Thompson, R. C.	927	1879	Ward, M. R.	3,976	1878	Wilkinson, A.	3,083	1873
"	1,622	1879	Ward, D., and Ball, A.	2,033	1878	"	3,472	1879
Thompson, S. P., and W. P.	4,983	1878	Ward, M. R.	2,538	1881	"	3,003	1882
Thompson, E.	3,923	1880	Warlich, F. H.	2,068	1880	Willams, P. W., and Crompton, R. E. B.	245	1879
Thomson, E. and Houston,	4,400	1879	Waterhouse, A. G.	5,185	1881	Willard, F. L.	2,803	1882
E. J.	315	1880	Waterhouse, F. G., and			Willatt, F. G.	3,042	1882
Thomson, H. L.	4,462	1878	Schuyler, D. A.	3,002	1882	Willatt, F. G., Harrington, F. W., and Lane, T. W.	3,539	1881
Thomson, J. H.	1,393	1881	Waters, T. J.	862	1874	Williams, J. S.	5,229	1881
Thomson, Sir W.	3,032	1881	Waters, S.	1,462	1882	"	5,233	1881
"	5,668	1881	Watson, E. B.	359	1879	"	84	1882
Thorman, A. J., Ludeke, J.			Watson, G.	390	1879	"	224	1882
E. F.	3,338	1878	Watson, J. J. W.	2,271	1880	Williams, J. S.	560	1882
Tilleard, F. D.	4,317	1878	Watson, T. A., and Anders,			"	700	1882
Timmins, H.	3,800	1874	G. L.	1,958	1880	"	766	1882
Tisdell, A. G., Marx, E.,			Watt, A.	4,255	1881	"	856	1882
Aklem, F., and Kayser, J.	351	1880	Wauthier, J.	3,097	1882	"	1,174	1882
Tissandier, G.	3,401	1881	Wauthier, J.	1,172	1882	"	1,556	1882
Tommasi, F.	4,405	1879	Webbers, G.	610	1876	"	2,558	1882
Tommasi, Société Universelle d'Electricité	2,782	1881	Webber, C. E., and Bolton,			"	*5,742	1881
"	4,057	1882	F. J.	686	1873	Wilson, C. H. Carus (See Carus Wilson)		
"	252	1881	Weiller, L.	1,821	1882	Wilson, J. S.	4,347	1878
Tongue (Lacomme, A.)	715	1881	Welch, E. J. C.	4,114	1878	"	4,348	1878
Townsend, J. D.	39	1881	"	4,278	1878	Wilson, R., and Russell, W. J.	687	1877
Tribe, A.	1,587	1882	"	4,635	1878	Wilson, W. S.	3,912	1878
"	124	1874	Wells, G., and Gilbert, A.	4,689	1878	Winter, G. K.	3,146	1881
Trouvé, G.	4,009	1880	"	1,510	1880	Winter, W.	1,264	1877
Truman, E. T.	375	1878	Werdermann, R.	1,960	1880	Wirth (Manly, M. M. and R. P., and Philips, W. J.)	1,475	1880
"	4,438	1878	"	476	1873	Wise, Lloyd (Birgin, E.)	5,085	1879
"	3,310	1880	"	1,433	1874	"	4,819	1881
Tschikoleff, W., and Kleiber, H.	2,193	1881	"	3,156	1874	"	4,820	1881
Tubini, T.	3,635	1881	"	4,805	1876	" (Mandon, J. A.)	2,147	1880
Tubini, A.	3,822	1881	"	1,829	1877	"	4,914	1880
Tyer, E.	1,845	1873	"	2,477	1878	" (Masin, T.)	792	1875
"	557	1876	"	2,301	1879	Wolf (Jurgensen, C. P., and Lorenz, L. V.)	2,416	1881
"	2,879	1881	"	79	1880	Wood, J. J.	2,851	1881
Tyler, H. W.	3,985	1878	"	304	1881	"	2,526	1882
"	4,575	1878	"	1,444	1882	"	2,531	1882
Union Electric Manufactur-			"	2,364	1882	"	2,563	1882
Co.	392	1882	Westphal, C.	2,823	1882	"	2,570	1882
Upton, H. E. M. D. C.	1,232	1881	Westinghouse, G.	3,409	1881	"	2,623	1882
Varicas (Richardson, G.)	2,644	1882	Weston, E.	4,280	1876	Wood, W. R., Smith, P. E., and Spruill, S. R.	2,632	1882
Varley, C. F.	270	1877	"	4,748	1877	Woodhouse, O. E., and Raw-		
"	2,184	1882	"	1,163	1882	son, F. L.	1,412	1882
"	2,185	1882	"	1,611	1882	Woods, E. and G.	3,917	1878
"	2,207	1882	"	1,614	1882	Woodward, A. T.	4,780	1881
Varley, C. F. and F. H.	5,396	1881	"	2,694	1882	Woodward, H.	2,642	1882
Varley, C. F., and Judd,			"	*4,903	1877	Woolley, L. G.	*3,049	1881
W.	441	1882	Weston Dynamo Electric Ma-			Wortley, A. H. P. Stuart-	3,656	1878
Varley, F. H.	4,100	1878	chine Co.	4,960	1878			
			Wetter (Jennings, R. S.)	1,699	1881			
			" (Nothombe, L.)	2,452	1882			
			" (Stanley, W.)	2,660	1882			
			" (Wheeler, W.)	3,858	1881			
			"	3,911	1881			

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	No.	Year		No.	Year		No.	Year
Wright, F.	3,435	1881	Young, G. S., and Hatton,			Zanni, G.	4,232	1877
"	3,437	1881	R. J.	1,689	1882	"	1,677	1878
"	4,778	1881	Young, T.	3,363	1879	"	4,673	1878
Wright, F., and Mackie, M.	1,029	1882				"	2,821	1879
W. W.	1,031	1882	Zanni, G.	2,266	1873	"	4,007	1880
	1,274	1882	"	1,855	1874	"	2,740	1882
Wright, F., and Ormiston,			"	3,795	1875	Ziffer, F. H.	2,741	1882
F. A.	5,006	1881	"	2,821	1876	Zingler, M.	4,412	1877
			"	4,222	1876	Zipernowsky, K.	1,153	1882
Young, F., and Freeman, J.	350	1879					1,580	1880

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SUBJECT MATTER.

Abstracts marked * will be found in the Addenda.

	No.	Year	ARC LAMPS—	No.	Year	ARC LAMPS—	No.	Year
ACCUMULATORS (<i>See</i> "Batteries, Secondary.")			Arc formed by repulsion due to current, <i>Gerard-Lescuyer</i>	3,697	1879	Carbon coils for, <i>Varley</i> ..	2,776	1882
Advertisements, illuminating, Hickisson	2,421	1882	Arc striking mechanism—			Carbon holders, (<i>See</i> "Carbons, Holders for.")		
Ammonia, producing, Clarke and Smith	4,850	1878	Siemens	4,208	1878	Clutch—		
Arago disc, Monckton	3,509	1874	Wilson	4,347	1878	<i>Brush</i>	2,003	1878
ARC LAMPS— (<i>See also</i> "Candles, Electric," "Arc-Incandescence Lamps;" "Semi-Incandescence Lamps;" "Carbons;" and "Electrodes.")			Heinrichs	4,595	1878	<i>De Mersanne and Bertin</i> ..	5,110	1878
<i>De Mersanne</i>	2,787	1875	Sellon, Ladd, and Edmunds	4,646	1878	Brain	5,139	1878
Prosser	3,466	1875	Reimenschneider and Christensen	4,693	1878	Bousfield	523	1879
Weathers	610	1876	<i>De Mersanne and Bertin</i> ..	5,060	1878	<i>Brush</i>	947	1879
Prosser and Moore	2,585	1877	Whyte	5,152	1878	<i>Krupp</i>	1,969	1879
Rapieff	4,432	1877	Rapieff	211	1879	<i>Gerard-Lescuyer</i>	3,697	1879
<i>Brush</i>	2,003	1878	Bousfield	523	1879	<i>Brush</i>	3,750	1879
<i>Siemens and Alleneck</i> ..	3,134	1878	Hedges	925	1879	Brockie	3,771	1879
Wilde	3,250	1878	<i>Brush</i>	947	1879	Hickley	4,354	1879
Siemens	3,315	1878	Mackenzie	1,635	1879	<i>Houston and Thomson</i> ..	4,400	1879
<i>Krupp</i>	3,837	1878	<i>Krupp</i>	1,969	1879	Harding	4,590	1879
Harding	4,047	1878	<i>Puvilland and Raphael</i> ..	2,111	1879	Scribner	5,156	1879
Cadett	4,022	1878	Andrews	2,321	1879	Joel	5,157	1879
Siemens	4,208	1878	Crompton	3,509	1879	<i>Houston and Thompson</i> ..	315	1880
<i>De Meritens</i>	4,690	1878	<i>Houston and Thomson</i> ..	4,400	1879	Harding	4,191	1880
Pulvermacher	4,774	1878	Harding	4,590	1879	Heinrichs	4,608	1880
Sabine	4,821	1878	Gatehouse	4,796	1879	Common and Joel	1,040	1881
Thompson	4,988	1878	Scribner	5,156	1879	Andrews	1,526	1881
Wilde	2,744	1879	Joel	5,157	1879	Grimstone	1,670	1881
Harrop	3,793	1879	<i>Eclairage Electrique</i> ..	1,553	1880	<i>Gerard-Lescuyer</i>	1,685	1881
<i>Eclairage Electrique</i> ..	1,553	1880	Watson	2,271	1880	Gulcher	2,038	1881
Gordon	1,826	1880	Heinrichs	4,608	1880	Hawkes and Bowman	2,402	1881
Apps	264	1881	<i>Maxim</i>	4,866	1880	Moffatt and Chichester ..	2,441	1881
Berly	1,027	1881	Hedges	4,988	1880	<i>Edison</i>	2,495	1881
Cohne	2,369	1881	Henley	5,137	1880	André	2,563	1881
André	2,563	1881	<i>Million</i>	2,788	1881	<i>Harding</i>	3,166	1881
<i>Million</i>	2,788	1881	<i>Bouteilloux and Laing</i> ..	3,214	1881	Hopkinson	3,362	1881
<i>Greb</i>	3,015	1881	Harling and Hartmann ..	3,473	1881	Lever	3,599	1881
<i>Woolley</i>	3,049	1881	<i>Daft</i>	4,775	1881	<i>Connolly</i>	3,668	1881
<i>Bouteilloux and Laing</i> ..	3,214	1881	André	4,948	1881	<i>Burrell</i>	3,679	1881
<i>Arey</i>	3,456	1881	<i>Gerard-Lescuyer</i>	5,660	1881	Brockie	4,504	1881
Rogers	4,855	1881	Mackenzie	95	1882	Newton	4,559	1881
<i>Mondos</i>	5,490	1881	Henley	130	1882	<i>Daft</i>	4,775	1881
Varley	5,665	1881	Hawkes	157	1882	<i>Waterhouse</i>	5,185	1881
<i>Williams</i>	224	1882	Brown	1,867	1882	<i>Mondos</i>	5,490	1881
Brockie	898	1882	Lea	1,919	1882	<i>Gerard-Lescuyer</i>	5,660	1881
Munro	1,626	1882	Brockie	2,370	1882	Hawkes	157	1882
Kennedy	2,286	1882	Akester	2,419	1882	Bright	377	1882
Deffy	2,628	1882	Hatton	2,654	1882	Jarman	563	1882
<i>Gloker</i>	2,674	1882	<i>Moffatt</i>	2,759	1882	Common	626	1882
<i>Roosevelt and Abdank</i> ..	3,070	1882	Attaching globes of, <i>Bauer and Co.</i>	1,915	1882	Graham	1,171	1882
Actuated by weights, Rapieff ..	831	1882	Automatic lighter—			Levey and Lumley	1,249	1882
Adjusted at a distance, <i>De Mersanne</i>	3,315	1876	<i>Weston Co.</i>	4,960	1878	Jeffery	1,570	1882
Adjusting position of arc, Hopkinson	3,509	1880	Wilde	5,197	1878	Munro	1,626	1882
Aërostatic, <i>Gerard-Lescuyer</i> ..	5,660	1881	Automatically putting electrodes successively in circuit, Desquiens ..	3,404	1881	Young and Hatton	1,680	1882
Alignment of carbons, Common	626	1882	Automatically short-circuiting main magnets of, Brockie	3,771	1879	Lea	1,919	1882
Applied to producing ammonia, Clarke and Smith	4,650	1873	Automatically switching in second pair of electrodes, Godfrey	4,718	1879	<i>Edison</i>	2,072	1882
Applied to signalling, <i>De Mersanne</i>	3,315	1876	Automatically switching into circuit, <i>Reynier</i> ..	1,971	1879	Lever	2,092	1882
						Voice	2,288	1882
						Ayrton and Perry	2,613	1882
						Gumpel	2,723	1882
						Chadburn	2,755	1882
						Emmens	2,914	1882
						<i>Gerard-Lescuyer</i>	2,992	1882
						Sperry	3,025	1882
						<i>Roosevelt and Abdank</i> ..	3,070	1882
						Courtenay	3,101	1882
						Combined with gas—		
						Spence	876	1879

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ARC LAMPS combined with gas—			ARC LAMPS—			ARC LAMPS—		
	No.	Year		No.	Year		No.	Year
Grant and Sennett	2,267	1879	Duplex, Brockie	2,370	1882	Multiplex, switch for,		
Watson	2,271	1880	" clutch, Brockie	4,504	1881	<i>Jablochkoff</i>	725	1880
Courtenay	4,659	1881	" with electrodes			Optical apparatus for (See		
Varley	5,396	1881	alternately consumed,			also "Optical Appa-		
Pritchard	2,974	1882	Grimstone	1,670	1881	ratus, Light Diffusing		
Compensating for burnt			Duplex, with movable gear-			reflectors and lanterns.)		
carbon, <i>Berjot</i>	4,428	1880	ing frame, <i>Wood</i>	2,570	1882	<i>Wilde</i>	618	1873
Compensating for reduced			Electrode floats up against			<i>De Mersanne</i>	3,315	1876
resistance of carbon,			refractory stop, <i>Ducretet</i>	65	1879	Regulated by air admitted		
<i>Brockie</i>	2,370	1882	Electrode formed by two			to cylinder, <i>Gerard-Les-</i>		
Compensating for variation			inclined carbons—			<i>cuyer</i>	5,660	1881
of driving weight, <i>Harrison</i>	3,875	1879	<i>Bouteilloux and Laing</i>	3,214	1881	Regulated by easily fused		
Completing circuit to, <i>Mil-</i>			<i>Rapieff</i>	4,432	1877	metallic strip, <i>Siemens</i>	2,110	1879
<i>lion</i>	2,788	1881	Electro-magnet for, <i>Emmens</i>	5,206	1879	Regulated by expansion—		
Connecting to leads, <i>Joel</i>	5,157	1879	" "	2,349	1882	<i>Lontin</i>	2,094	1877
Controlling number of,			Encircled by "electrical			<i>Siemens</i>	2,281	1878
Common and <i>Joel</i>	1,040	1881	loop," <i>Eclairage-Elec-</i>	863	1879	" "	3,315	1878
Conveying current to car-			<i>trique</i>	1,553	1880	" "	2,110	1879
bons of, <i>André</i>	2,764	1880	Escapements for, <i>Water-</i>			<i>Harding</i>	4,590	1879
Cut-outs, automatic (See also "Cut-			<i>house</i>	5,185	1881	<i>Guest</i>	2,980	1880
outs and Switches, Automatic.")			Feeding pulverised sub-			Regulated by governors		
<i>Powell</i>	4,435	1874	stances to, <i>Williams</i>	224	1882	driven by engine, <i>Sed-</i>		
<i>Sawyer and Man</i>	4,705	1878	Governed by magnet, <i>Day</i>	1,261	1874	<i>laczek and Wikmill</i>	1,596	1881
<i>Mori, Hallewell, Milner,</i>			Globes for—			Regulated by paddle-wheel,		
and <i>Griffin</i>	740	1879	<i>Holmes</i>	920	1879	<i>Krupp</i>	3,837	1878
<i>Brush</i>	947	1879	<i>André</i>	5,206	1879	Regulated periodically,		
<i>Rogier</i>	75	1880	<i>Munro</i>	1,626	1882	<i>Brockie</i>	3,771	1879
<i>Eclairage-Électrique</i>	1,553	1880	Hand regulated, <i>Wilde</i>	618	1873	Regulating, <i>Heincke</i>	4,275	1877
<i>Harding</i>	4,191	1880	Hermetically enclosed, <i>Con-</i>			Regulating distance be-		
<i>Berjot</i>	4,428	1880	cornotti	3,272	1879	tween carbons, <i>Imray</i>	382	1879
<i>Heinrichs</i>	4,608	1880	Holding globe of, <i>Hill</i>	3,893	1881	Regulating feed by soften-		
<i>Siemens</i>	4,614	1880	Hydrostatic—			ing of glass, <i>Soignac</i>	740	1882
<i>Andrews</i>	1,526	1881	<i>Harding</i>	4,046	1878	Regulating length of arc,	2,563	1882
<i>Wood</i>	2,851	1881	<i>Stockman</i>	4,315	1878	<i>Wood</i>	2,570	1882
<i>Lever</i>	3,599	1881	<i>Higgins</i>	4,456	1878	Regulating from a distance,		
<i>Connolly</i>	3,668	1881	<i>Molera and Celrian</i>	299	1879	<i>Abdank</i>	339	1882
<i>Hill</i>	3,893	1881	<i>Paraire</i>	325	1879	Regulator for, <i>Million</i>	3,085	1879
<i>Sheridan</i>	4,617	1881	<i>Imray</i>	382	1879	Resistance balance for,		
<i>Waterhouse</i>	5,185	1881	<i>Sedlaczek and Wikmill</i>	2,322	1879	<i>Roosevelt and Abdank</i>	3,070	1882
<i>King and Brown</i>	5,272	1881	<i>Gerard-Lescuyer</i>	3,697	1879	Reversing polarity of arc		
<i>Hawkes</i>	157	1882	<i>Wigner</i>	553	1880	striking magnet, <i>Brockie</i>	898	1882
<i>Jarman</i>	563	1882	<i>Cohne</i>	2,236	1880	Self-focussing (See also "Arc		
<i>Jeffery</i>	1,570	1882	<i>Hopkinson</i>	3,509	1880	Lamps, with Semircir-		
<i>Lever</i>	2,092	1882	<i>Sedlaczek and Wikmill</i>	1,596	1881	cular and with Inclined		
<i>Wood</i>	2,563	1882	<i>Hopkinson</i>	3,362	1881	Carbons and with		
<i>Moffatt</i>	2,759	1882	<i>Brown</i>	4,011	1881	<i>Cords</i> .)		
<i>Sperry</i>	3,025	1882	<i>Prentice</i>	4,777	1881	<i>Day</i>	1,261	1874
Dash-pot arrangement for—			<i>King and Brown</i>	5,272	1881	<i>Marcus and Egger</i>	2,234	1877
<i>Von Altenack</i>	4,949	1878	<i>Rapieff</i>	831	1882	<i>Pulvermacher</i>	4,774	1878
<i>Siemens</i>	2,810	1879	<i>Spagnoletti</i>	869	1882	<i>Von Altenack</i>	4,949	1878
<i>Brush</i>	3,750	1879	<i>Brown</i>	1,867	1882	<i>De Mersanne</i>	5,660	1878
<i>Maxim</i>	4,866	1880	Increasing light from—			<i>De Mersanne and Bertin</i>	5,110	1873
Common and <i>Joel</i>	1,040	1881	<i>Mignon and Rouart</i>	3,402	1881	<i>Brain</i>	5,139	1878
<i>Grimstone</i>	1,670	1881	<i>Harrison</i>	3,559	1881	<i>Whyte</i>	5,152	1878
<i>Gerard-Lescuyer</i>	1,685	1881	<i>Williams</i>	224	1882	<i>Jaspar</i>	83	1879
<i>André</i>	2,563	1881	<i>Emmens</i>	2,349	1882	<i>Keith</i>	1,387	1879
<i>Woolley</i>	3,049	1881	In vacuo—			<i>Harrison</i>	3,875	1879
<i>Hopkinson</i>	3,362	1881	<i>Powell</i>	4,435	1874	<i>Houston and Thomson</i>	4,400	1879
<i>Sheridan</i>	4,617	1881	<i>Varley</i>	4,100	1878	<i>Bouteilloux and Laing</i>	842	1880
<i>Gerard-Lescuyer</i>	5,660	1881	<i>Eclairage Électrique</i>	863	1879	<i>Krizik and Piette</i>	1,397	1880
<i>Hawkes</i>	157	1882	<i>Puydt and Cougnet</i>	1,553	1880	<i>Eclairage Électrique</i>	1,553	1880
<i>Bright</i>	377	1882	<i>Munro</i>	350	1880	<i>Siemens</i>	4,614	1880
Common	626	1882	Localising arc, <i>Wilde</i>	1,626	1882	<i>Mandon</i>	4,914	1880
<i>Andrews</i>	1,324	1882	Magnets for, <i>Emmens</i>	2,256	1882	<i>Fye</i>	774	1881
<i>Brockie</i>	2,370	1882	Magnets for unlocking wheel	2,349	1882	<i>Sedlaczek and Wikmill</i>	1,596	1881
<i>Gerard-Lescuyer</i>	2,992	1882	train of, <i>Gravier</i>	5,295	1881	<i>Harling and Hartmann</i>	3,473	1881
<i>Sperry</i>	3,025	1882	Maintaining distance be-			<i>Cance</i>	3,976	1881
Defining point of arc,			tween parallel carbons of,			<i>Brown</i>	4,011	1881
<i>Weston Co.</i>	4,960	1878	<i>Hedges</i>	81	1879	<i>Sheridan</i>	4,617	1881
Differential, <i>Siemens and</i>			<i>Mercury contact for, Jaspar</i>	83	1879	<i>Varley</i>	5,396	1881
<i>Altenack</i>	2,006	1873	<i>Mining, André</i>	830	1879	<i>Kennedy</i>	5,524	1881
Double water globe for,			<i>Cougnet</i>	2,000	1879	<i>Mackenzie</i>	95	1882
<i>McCarty and Sellière</i>	144	1879	Multiplex (See also "Duplex.")			<i>Hcnley</i>	130	1882
Driven by air current,			<i>Prosser and Moore</i>	2,585	1877	<i>Crompton</i>	346	1882
<i>Heinke</i>	4,275	1877	<i>Kepling</i>	717	1878	<i>Spagnoletti</i>	869	1882
Driven by clockwork,			<i>Bodmer</i>	4,476	1878	<i>Kennedy</i>	1,199	1882
<i>Heinke</i>	4,275	1877	<i>Mori, Hallewell, Griffin,</i>			<i>Gatehouse and Kempe</i>	2,569	1882
Driven by engine, <i>Heinke</i>	4,275	1877	and <i>Milner</i>	740	1879	<i>Crompton</i>	2,619	1882
Duplex (See also "Multiplex.")			<i>André</i>	830	1879	<i>Wood</i>	2,632	1882
<i>Day</i>	1,261	1874	<i>Jablochkoff</i>	1,175	1879	Self-regulating, <i>Brockie</i>	1,942	1881
<i>Brockie</i>	3,771	1879	<i>Brush</i>	3,750	1879	Short-circuiting magnet of,		
Common and <i>Joel</i>	1,040	1881	<i>Gatehouse</i>	4,796	1879	<i>Rapieff</i>	211	1879
<i>Hawkes and Bowman</i>	2,402	1881	<i>Eclairage Électrique</i>	1,553	1880	Short-circuiting main, sole-		
<i>Hill</i>	3,893	1881	<i>Bergot</i>	4,428	1880	noid of, <i>Hopkinson</i>	1,959	1879
<i>Burgin</i>	4,820	1881	<i>Lacomme</i>	715	1881	Solenoid core for, <i>Krizik</i>		
<i>Waterhouse</i>	5,185	1881	<i>Berly</i>	1,236	1881	and <i>Piette</i>	1,397	1880
<i>Mondos</i>	5,490	1881	<i>Brockie</i>	1,942	1881	Stopping action of, <i>Maxim</i>	4,866	1880
<i>Hawkes</i>	157	1882	<i>Boulliguine</i>	1,968	1881	<i>Street, Harrison</i>	3,875	1879
<i>Weston</i>	1,163	1882	<i>Gadot</i>	2,344	1881	<i>Submarine, Tommasi</i>	4,405	1879
			<i>Gibbs</i>	4,533	1881	" <i>Heinke and Long</i>	231	1880
			<i>Andrews</i>	1,324	1882	Supplied with finely divided		
						carbon and gas, <i>Pritchard</i>	2,774	1882

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ARC LAMPS—	No.	Year	ARC LAMPS with—	No.	Year	ARC LAMPS with—	No.	Year
Supplied with powdered charcoal, &c.,			Carbons, circular (See also "Arc Lamps with Curved and with Semicircular Carbons.")			Differential solenoid—		
Rapieff	4,432	1877	Heinrichs	4,595	1878	Kennedy	1,199	1882
Varley	4,100	1878	"	4,608	1880	Differential solenoid and special core, Krizik and Piette	1,397	1880
McCarty and Selliere ..	144	1879	Carbons, circular and mercury float, Mandon ..	2,147	1880	Definite feed and periodic adjustment, Brockie ..	3,771	1879
Rapieff	211	1879	Carbons, circular and radius, arms, Mandon	4,914	1880	Disc electrode (See also "Arc Lamps, with Rotating Disc Electrode.")		
Grant and Sennett	2,267	1879	Carbons concentric, Asten	2,020	1882	Prosser	3,466	1875
Somzee	1,852	1881	Carbons fed by weights, Hawkes	157	1882	Prosser and Moore	2,585	1877
Williams	224	1882	Carbons, fed to common centre, Brain	5,139	1878	Reynier	2,399	1878
Supplying currents to, Blandy	2,060	1879	Carbons held by combustible material, Emmens	2,914	1882	André	830	1879
Supporting globes of, Maxim	4,866	1880	Carbons, helical—			Andrews	2,321	1879
Suspended by springs, Daft	4,775	1881	Freeman	5,307	1878	Double electrode, Prosser ..	3,466	1875
Switching in pairs of rods, Tommasi	4,405	1879	Pilleux	636	1880	Electrodes in sealed glass receiver, Emmens	2,349	1882
Unlocking wheel train of, Gravier	5,295	1881	Carbons normally held apart, Lever	2,092	1882	Electrodes, tubular, Zubini	3,635	1881
ARC LAMPS with—			Carbons passing through orifices in refractory block, Bureau	1,704	1880	Endless cord and weight, André	2,563	1881
Abutments (See also "Arc Lamps with Refractory Electrodes.")			Carbons, vertical and horizontal, Brain	5,139	1878	Escapement—		
Ducretet	65	1879	Circular series of rods abutting on carbon block, Tommasi	4,405	1879	Cance	3,976	1881
Siemens	2,110	1879	Clutch regulating descent of weight, Harding ..	4,590	1879	Graham	1,117	1882
Harding	4,191	1880	Clockwork—			Expansible metallic spiral, Harding	4,590	1879
Hedges	4,988	1880	Day	1,261	1874	Fan driven by heated air, Sabine	4,821	1878
Roche	2,781	1882	Whitehouse	1,820	1874	Feed magnet automatically short-circuited, Bright ..	377	1882
Adjustable fulcrumed lever, Common	626	1882	De Mersanne	3,315	1876	Feed regulated by clutch, Moffatt and Chichester ..	2,441	1881
Arc striking solenoid automatically cut out, Andrews	2,321	1879	Werdermann	4,805	1876	Feed roller, Houston and Thomson	315	1880
Automatic cut-out for solenoid, Million	2,788	1881	Heinke	1,910	1877	Feed wheel and ratchet, Grumpel	2,723	1882
Automatic make and break, Harding	3,166	1881	Reynier	2,987	1877	Float—		
Bevel gearing, Varley ..	5,665	1881	De Mersanne	5,060	1878	Cohne	2,236	1880
Brake, direct—			Inray	382	1879	Watson	2,271	1886
Bauer and Co.	1,915	1882	Brockie	1,713	1882	Hawkes and Bowman	2,402	1881
Brockie	1,942	1881	Coiled spring, Day	1,261	1874	André	2,563	1881
Brake operated by shunt solenoid, Andrews	1,324	1882	Compound solenoid, Marcus and Egger	2,934	1877	Fluid electrode, Prosser ..	3,466	1875
Carbon abutment block, Higgs	454	1879	Contact maker, Marcus and Egger	2,934	1877	Prosser and Moore	2,585	1877
Carbon and cast-iron block, Sabine	4,821	1878	Converging carbons and abutments, Harding ..	4,191	1880	Rapieff	4,432	1877
Carbon disc and rod, Gerard-Lescuyer	3,697	1879	Cords—			Fly and stop, Henley	120	1882
Carbon disc and rod, Hickley ..	4,354	1879	Jaspar	83	1879	Four circular carbons, Heinrichs	4,608	1880
" dies, André	830	1879	Bousfield	523	1879	Friction arm and roller, Higgs	454	1879
" fed through hollow carbon, Thompson	1,622	1879	Keith	1,387	1879	Friction rollers, ratchet, pawl, and shunt solenoid, Siemens	4,614	1880
Carbon holders supported on fluid in closed vessels, Sedlacek and Wiknill ..	1,596	1881	Joel	5,157	1879	Friction rollers and toothed wheel, Houston and Thomson	4,400	1879
Carbon passing through steatite ferrule, André ..	5,206	1879	Crompton	346	1882	Fusible stops—		
Carbon placed within rotating spirals, Heinrichs ..	4,603	1880	Rapieff	831	1882	Harding	4,590	1879
Carbon resistance, Greb ..	3,015	1881	Crompton	2,619	1882	Gatehouse	4,796	1879
Carbon resting on platinum tip, Siemens	2,110	1879	Cords and escapement, Harding	3,166	1881	Gearing (See also "Arc Lamps with Rack, &c.")		
Carbon rod and block, Cougnet	2,000	1879	Cords and gearing, Harding and Hartmann	3,473	1881	Whyte	5,152	1878
Carbon rod and plate, Jamn	863	1879	Cords and pulleys, Birgin ..	4,820	1881	Chertemps	3,349	1881
Carbon rod fed against insulated disc, Henley ..	5,137	1880	Cords and ratchet—			Munro	1,626	1882
Carbon rods floating in mercury tubes, Tommasi	4,405	1879	Sheridan	4,617	1881	Gearing, bevel, Varley	5,665	1881
Carbon rod pressed against insulating core of tubular carbon—			Cougnet	2,000	1879	" controlled by two flat coils, Holcombe ..	1,384	1881
Boutelloux and Laing ..	842	1880	Harrison	3,875	1879	Gearing and brake—		
"	3,214	1881	Gerard-Lescuyer	3,697	1879	Crompton	3,509	1879
Rogers	4,855	1881	Cord, roller, and escapement, Mackenzie	1,635	1879	Brockie	1,942	1881
Carbon rod resting on copper block, André	5,206	1879	Cords and weight—			"	2,370	1882
Carbon rollers and rod, Concornotti	3,272	1879	Million	2,788	1881	Gearing and detent—		
Carbons abutting against chisel edges, Siemens ..	2,110	1879	Cance	3,976	1881	Maxim	4,866	1880
Carbons, balanced, Kennedy	1,199	1882	André	2,563	1881	Henley	5,137	1880
Carbons C-shaped, Heinrichs	4,595	1878	Cords, weights, ratchets, and pawls, Kennedy ..	5,524	1881	Gearing and escapement, Brockie	2,370	1882
Carbons at right angles—			Curved carbons and mercury float, Mandon ..	2,147	1880	Gearing and fly—		
Whitehouse	1,820	1874	Curved electrodes (See also "Arc Lamps with Semicircular Carbons.")			Bright	377	1882
Heinrichs	4,595	1878	Werdermann	4,805	1876	De Mersanne and Bertin ..	5,110	1878
Inray	382	1879	Varley	4,905	1876	Gearing, flyer and brake, Siemens	4,208	1878
			Curved metallic water-cased electrode, Heinrichs ..	4,589	1879	Gearing ratchet and pawl—		
			Differential motor—			Hatton	2,654	1882
			André	2,764	1880	Mathieson	2,734	1882
			Tschikoleff and Kleiber ..	2,198	1881	Moffatt	2,759	1882
			Differential solenoid—			Heinrichs	4,595	1878
			Von Altnneck	4,949	1878	Common and Joel	1,040	1881
						Gearing and weight, Henley	130	1882
						Globe charged with inert gas—		
						Remington	192	1879
						Varley	5,396	1881
						Heating coil in expansible chamber, Edison	2,072	1882

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ARC LAMPS with—	No.	Year	ARC LAMPS with—	No.	Year	ARC LAMPS with—	No.	Year
Helical carbons inclined to one another, <i>Pilleux</i> ..	636	1880	Parallel carbons, <i>Jamin</i>	863	1879	Rotating disc electrode, <i>Varley</i>	4,905	1876
Helical carbons and stops, <i>Pilleux</i>	636	1880	Berby	1,236	1881	Heinke	1,910	1877
Horizontal superposed carbons, <i>Harding</i>	4,590	1879	Tubini	3,822	1881	<i>Reynier</i>	2,982	1877
Incandescence lamp in its shunt circuit, <i>Gatehouse and Kempe</i>	2,569	1882	<i>Gerard-Lescuyer</i>	2,144	1882	Heinke	4,275	1877
Inclined carbons—			Parallel carbons and refractory stop, <i>Hedges</i>	81	1879	Ziffer	4,412	1877
Wilson	4,347	1878	Parallel copper electrodes and stream of carbon, <i>Wier</i>	684	1879	Zanni	4,573	1878
Rapieff	4,432	1877	Pawl and rack, <i>Roosevelt and Abdank</i>	3,070	1882	Siemens	4,208	1878
Sellon, Ladd and Edmunds	4,646	1878	Peculiarly wound solenoid, <i>Sperry</i>	3,025	1882	Gye	4,473	1878
<i>Von Alteneck</i>	4,949	1878	Pendulum and escapement, <i>Von Alteneck</i>	4,949	1878	Forbes	4,116	1878
Rapieff	211	1879	Pivoted arms operated by pinions, <i>Dubos</i>	427	1879	Whyte	5,152	1878
Brockie	3,771	1879	Pivoted guide tube, <i>Hedges</i>	925	1879	Heinrichs	4,595	1878
<i>Gerard-Lescuyer</i>	1,552	1880	Pivoted + carbons inclined towards—carbon, <i>André</i>	830	1879	Rapieff	211	1879
<i>Harding</i>	4,191	1880	Plate electrodes, <i>Wallace</i>	240	1878	Crompton and Willans	245	1879
<i>Gerard-Lescuyer</i>	1,685	1881	Powdered substances fed to arc, <i>Grant and Sennett</i>	2,267	1879	Henley	51,37	1880
<i>Bouliquiné</i>	1,968	1881	Pulleys and brake, <i>Lande</i>	834	1882	<i>Étève</i>	48	1881
Henley	130	1882	Pure calcium fed thereto, <i>McCarty and Sellière</i>	144	1879	Andrews	1,526	1881
Spagnoletti	869	1882	Rack and gearing, <i>Bright</i>	3,305	1881	<i>Edison</i>	2,495	1881
Graham	1,171	1882	Rack and pinion, <i>Reynard</i>	5165	1878	Gibbs	4,533	1881
Jeffery	1,570	1882	Rack and spring pawl, <i>Andrews</i>	2,321	1879	Wier	2,686	1882
Emmens	2,914	1882	Rack, pinion, and brake arrangement, <i>Union Co.</i>	392	1882	Rotating hollow carbons at right angles, <i>Imray</i>	382	1879
Inclined carbons and refractory block—			Rack, pinion, and pawl, <i>Heinrichs</i>	4,608	1880	Screw feed—		
Wilde	5,197	1878	Racks, pinion, and pendulum, <i>Million</i>	3,085	1879	<i>De Mersanne</i>	3,315	1876
<i>McCarty and Sellière</i>	144	1879	Rack, pinion, and ratchet wheel, <i>Gumpel</i>	253	1881	Ziffer	4,412	1877
Inner and outer tubes, <i>André</i>	5,206	1879	Radial arms, pinions, and gearing, <i>Heinrichs</i>	4,589	1879	<i>De Mersanne and Bertin</i>	5,110	1878
Intermittent feed, <i>Brockie</i>	1,713	1882	Radial electrode—			<i>Reynard</i>	5,165	1878
Jockey roller, <i>Lea</i>	1,919	1882	Prosser	3,466	1875	<i>Mackenzie</i>	1,635	1879
Lever adjustably fulcrumed Common	626	1882	Prosser and Moore	2,585	1877	<i>Roguer</i>	75	1880
<i>Mackenzie</i>	95	1882	Radius bars operated by chains and weights, <i>Puvilland and Raphaël</i>	2,111	1879	<i>Muirhead and Hopkinson</i>	153	1881
Long solenoid—			Radius rods, <i>Dubos</i>	427	1879	<i>Cance</i>	3,976	1881
<i>Krizik and Piette</i>	1,397	1880	Ratchet feed, <i>Gatehouse and Kempe</i>	2,569	1882	<i>Akester</i>	2,419	1882
<i>Krizik and Piette</i>	2,712	1882	Ratchet and pawl, <i>Von Alteneck</i>	4,949	1878	<i>Bardon</i>	3,079	1882
Magnet core in two parts, <i>Andrews</i>	1,526	1881	Refractory block—			Semicircular carbons—		
Magnetic carbons, <i>Hedges</i>	925	1879	<i>Bureau</i>	1,704	1880	<i>Heinrichs</i>	4,595	1878
Magnetic clutch—			Wilde	5,197	1878	<i>Dubos</i>	427	1879
Gülcher	2,038	1881	<i>McCarty and Sellière</i>	144	1879	<i>Puvilland and Raphaël</i>	2,111	1879
<i>André</i>	2,563	1881	Harrison	3,559	1881	<i>Heinrichs</i>	4,589	1879
Magnetism of solenoid automatically reversed, <i>Brockie</i>	4,504	1881	Refractory electrodes—			<i>Gatehouse</i>	4,796	1879
Main magnet automatically cut out, <i>Crompton</i>	346	1882	Heinke	1,910	1877	<i>Mandon</i>	2,147	1880
Main magnet normally overpowering shunt, <i>Waterhouse</i>	5,185	1881	Hickley	4,132	1878	<i>Heinrichs</i>	4,608	1880
Main and shunt magnets, <i>Brush</i>	947	1879	Sellon, Ladd, and Edmunds	4,646	1878	<i>Mandon</i>	4,914	1880
Main and shunt solenoids, <i>Von Alteneck</i>	2,652	1879	<i>Delaye</i>	1,536	1881	Separate feed current, <i>André</i>	4,948	1881
Make-and-break, <i>Harding</i>	3,166	1881	<i>Daft</i>	4,775	1881	Shunt circuit automatically broken, <i>Scribner</i>	5,156	1879
Motor and relay, <i>Mackenzie</i>	95	1882	<i>Rogers</i>	4,855	1881	Shunt feed magnet, <i>Mofatti</i>	2,759	1882
Motor, contact lever, and shunt solenoid, <i>Houston and Thomson</i>	315	1880	<i>Roche</i>	5,477	1881	Shunt magnet, <i>Krupp</i>	3,837	1878
Motor, differential—			<i>Mackenzie</i>	95	1882	Shunt electro-magnet automatically cut out, <i>Mathieson</i>	2,734	1882
<i>André</i>	2,764	1882	Refractory substance, gas or powder fed to arc, <i>Rapieff</i>	211	1879	Shunt solenoid, <i>Gerard-Lescuyer</i>	1,685	1881
<i>Tschikoleff and Kleiber</i>	2,198	1881	Regulating cords, <i>Rapieff</i>	831	1882	Six carbons fed to common centre, <i>Brain</i>	5,139	1878
Motor driven by heated air from arc, <i>Varley</i>	5,665	1881	Regulating solenoids, <i>Fyfe</i>	774	1881	Solenoid—		
Motor opposing weight of carbon, <i>Andrews</i>	2,321	1879	Relay and electric motor, <i>Mackenzie</i>	95	1882	<i>Lontin</i>	2,094	1877
Movable gearing frame—			Relay feed solenoid, <i>André</i>	4,943	1881	<i>Brush</i>	2,003	1878
<i>Bousfield</i>	523	1879	Resistance, carbon, <i>Creb</i>	3,015	1881	<i>Dubos</i>	2,401	1878
<i>Maxim</i>	1,649	1880	Retarding apparatus, <i>Waterhouse</i>	5,185	1881	<i>Von Alteneck</i>	2,652	1879
<i>Berjot</i>	4,428	1880	Ring series of carbons, <i>Harrison</i>	3,875	1879	<i>Fyfe</i>	774	1881
<i>Gumpel</i>	253	1881	Rotating arc—			<i>André</i>	494	1881
Common and Joel	1,040	1881	<i>Jamin</i>	863	1879	<i>Gerard-Lescuyer</i>	1,685	1881
<i>Wood</i>	2,851	1881	<i>Andrews</i>	2,321	1879	Solenoid automatically cut out—		
<i>Fyfe and Main</i>	3,821	1881	Rotating carbon helices, <i>Freeman</i>	5,307	1878	<i>Andrews</i>	2,321	1879
<i>Bürgin</i>	4,820	1881	Rotating carbon ring and two discs, <i>Harrison</i>	3,875	1879	<i>Million</i>	2,788	1881
<i>Varley</i>	5,396	1881	Rotating disc electrode—			Solenoid, compound—		
<i>Crompton</i>	346	1882	Whitehouse	1,820	1874	<i>Marcus and Egger</i>	2,934	1877
<i>Wood</i>	2,563	1882	Weathers	610	1876	Solenoid cores acting as dash-pots, <i>Chadburn</i>	2,755	1882
<i>Moffatt</i>	2,759	1882				Solenoid, differential—		
Parallel carbons (See also "Candles, Electric.")						<i>Von Alteneck</i>	4,949	1878
<i>Sabine</i>	4,821	1878				<i>Kennedy</i>	1,199	1882
<i>Watson Co.</i>	4,960	1878				Special core—		
<i>Rapieff</i>	211	1879				<i>Krizik and Piette</i>	1,397	1880
<i>Mori, Hallewell, Milner, and Griffin</i>	740	1879				<i>Thomas</i>	578	1882
						<i>Krizik and Piette</i>	2,712	1882
						Spiral carbon surrounding straight carbon, <i>Pulvermacher</i>	4,774	1878
						Spring, coiled, <i>Day</i>	1,261	1874
						Spring and dash-pot, <i>Varley</i>	5,396	1881
						Step-by-step differentially wound solenoid, <i>Krizik and Piette</i>	2,712	1882
						Stream of finely divided carbon, <i>Varley</i>	4,100	1878
						Three carbon plates, <i>Andrews</i>	2,321	1879
						Three insulated parallel plates, <i>Andrews</i>	2,321	1879
						Tilting holders, <i>Weston Co.</i>	4,960	1878

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ARC LAMPS with—	No.	Year	ARMATURES—	No.	Year	ARMATURES—	No.	Year
Train of wheels and fly, <i>De Mersanne and Bertin</i> ..	5,110	1878	<i>Arey</i> ..	3,456	1881	Core, spiral, Chadburn ..	2,755	1882
Tubular electrodes for supply of carbonaceous matter, Tubini ..	3,635	1881	Berthoud, Borel, and Co. ..	4,026	1881	Counter currents in, preventing, Wilde ..	5,008	1880
Two carbon rotating discs, Henley ..	5,137	1880	Varley ..	5,665	1881	Cut-out, fusible, Edison ..	33	1880
Two differential magnets and clutch, Levey and Lumley ..	1,249	1882	<i>Williams</i> ..	85	1882	Cutting out single coils of, Edison ..	3,964	1880
Two opposing motors, <i>Tschikoleff and Kleiber</i> ..	2,198	1881	Akester and Barnes ..	986	1882	Cylindrical—		
Two pairs of carbons at right angles, Heinrichs ..	4,595	1878	<i>Williams</i> ..	1,174	1882	<i>Weston</i> ..	*4,903	1877
Two pairs of inclined carbons, <i>Gerard-Lescuyer</i> ..	1,552	1880	Matthews ..	1,201	1882	Pulvermacher ..	4,844	1878
Two pairs of semicircular carbons at right angles, Heinrichs ..	4,589	1879	<i>Williams</i> ..	1,556	1882	<i>Weston Co.</i> ..	4,960	1878
Two parallel C carbons and rotating cylinder, Heinrichs ..	4,595	1878	Kennedy ..	1,640	1882	Rapieff ..	211	1879
Two parallel discs, Andrews ..	2,321	1879	Chertemps and Dandeu ..	1,747	1882	Elphinstone and Vincent ..	332	1879
Two + and one — electrode and abutment, Hedges ..	4,988	1880	Rogers ..	1,760	1882	Bousfield ..	523	1879
Two semicircular and one straight electrode, Heinrichs ..	4,589	1879	Floyd and Kirkland ..	2,225	1882	Andrews ..	2,321	1879
Two upper inclined carbons, Jeffery ..	1,570	1882	<i>Williams</i> ..	2,558	1882	Edison ..	2,402	1879
Variable leverage, Mackenzie ..	95	1882	<i>Schuyler and Waterhouse</i> ..	3,002	1882	<i>Houston and Thomson</i> ..	4,400	1879
Verge escapement, Graham ..	1,171	1882	Annular, Werdermann ..	3,156	1874	" ..	315	1880
Vertical carbons and carbon disc, André ..	830	1879	Arrangement of, Richardson ..	5,681	1881	<i>Zipernowsky</i> ..	1,580	1880
Vertical carbon and horizontal carbons fed to fixed centre, Brain ..	5,139	1878	Automatically short-circuiting coils of, Chertemps and Dandeu ..	1,747	1882	Gumpel ..	3,324	1880
Vibrating armature, Hawkes and Bowman ..	2,492	1881	Circuits, arrangement of, (See also "Armatures, Winding.")			Thompson ..	3,928	1880
Vibrating electrodes, <i>De Mersanne</i> ..	3,315	1876	<i>Weston</i> ..	*4,903	1877	<i>Hussey and Dodd</i> ..	4,265	1880
Vibrating electrodes, Wier ..	684	1879	Formby ..	565	1879	Gumpel ..	253	1881
Water-cased terminal, Siemens ..	2,110	1879	<i>Bürgin</i> ..	5,085	1879	<i>Edison</i> ..	1,240	1881
Water-jacketed carbons, Remington ..	192	1879	<i>Houston and Thomson</i> ..	315	1880	<i>Hussey and Dodd</i> ..	2,375	1881
ARC INCANDESCENCE LAMPS (see also "Semi-Incandescence Lamps.")			Elphinstone and Vincent ..	2,893	1880	<i>Edison</i> ..	2,954	1881
Werdermann ..	2,477	1878	Elmore ..	3,832	1880	Newton ..	4,559	1881
Hickley ..	4,132	1878	Heinrichs ..	4,608	1880	<i>Griscom</i> ..	5,551	1881
Parallel, Werdermann ..	2,477	1878	<i>Lachaussee</i> ..	2,761	1881	Thomson ..	5,668	1881
ARMATURES—			<i>Edison</i> ..	2,954	1881	<i>Gravier</i> ..	943	1882
Tyer ..	1,845	1873	Harling and Hartmann ..	3,472	1881	Vincent and Elphinstone ..	2,340	1882
<i>Siemens and Altenek</i> ..	2,006	1873	Fahrig ..	4,107	1881	Ayrton and Perry ..	2,830	1882
<i>Gaumé</i> ..	2,618	1873	Akester ..	5,525	1881	Cylindrical cage, <i>Edison</i> ..	3,932	1881
Monckton ..	265	1874	<i>Williams</i> ..	85	1882	" hollow, <i>Landé</i> ..	838	1882
" ..	3,509	1874	<i>Siemens</i> ..	760	1882	and <i>Altenek</i> ..	3,134	1878
Chutaux ..	4,454	1874	Rogers ..	1,760	1882	Cylindrical, with diagonal coils, Elphinstone and Vincent ..	2,894	1880
<i>Bürgin</i> ..	3,243	1875	<i>Wood</i> ..	2,623	1882	Disc—		
<i>Fuller and Crandall</i> ..	3,364	1875	Fyfe and Main ..	2,636	1882	Monckton ..	265	1874
<i>Camacho</i> ..	3,416	1875	Willard ..	2,803	1882	Sprague ..	4,762	1878
<i>Kimball</i> ..	3,999	1875	Gordon ..	2,871	1882	Rapieff ..	211	1879
<i>Basket</i> ..	1,931	1876	<i>Maquaire</i> ..	2,885	1882	<i>Seeley</i> ..	1,998	1880
Zanni ..	2,821	1876	Ayrton and Perry ..	3,036	1882	<i>Edison</i> ..	2,954	1881
Lontin ..	3,264	1876	Coils arranged in symmetrical sets, <i>Schuyler and Waterhouse</i> ..	3,002	1882	Thomson ..	5,668	1881
Faure ..	3,670	1876	Coils, insulated metallic tape, Brougham ..	2,044	1882	Phillips and Johnson ..	1,347	1882
Varley ..	4,905	1876	Coils, insulating, <i>Williams</i> ..	85	1882	Rogers ..	1,760	1882
" ..	270	1877	" manufacturing, Vincent and Elphinstone ..	2,340	1882	Gerard-Lescuyer ..	1,878	1882
Jablochkoff ..	3,187	1877	Coils, radially adjustable, <i>Maquaire</i> ..	2,885	1882	Vincent and Elphinstone ..	2,340	1882
Hickley ..	3,552	1877	Compound disc, <i>Edison</i> ..	2,052	1882	Jarman ..	2,565	1882
Varley ..	4,435	1877	" ring—			Fyfe and Main ..	2,636	1882
Schuckert ..	4,464	1877	<i>Bürgin</i> ..	5,085	1879	Driving—		
<i>Gramme and Ivernois</i> ..	953	1878	Akester ..	5,525	1881	Zanni ..	4,232	1877
<i>Brush</i> ..	2,003	1878	Chameroy ..	2,295	1882	Thomson ..	5,668	1881
<i>Société d'Electricité</i> ..	4,066	1878	Compound pole—			Drum, Williams ..	1,566	1882
Higgs ..	4,206	1878	Akester and Barnes ..	986	1882	Duplex, Brockie ..	756	1882
Verrue ..	4,287	1878	Piot ..	1,692	1882	Ellipsoidal, Werdermann ..	3,156	1874
Formby ..	565	1879	Compound disc, <i>Edison</i> ..	2,052	1882	Grooved, <i>Paine and Paine</i> ..	2,049	1875
<i>Keith</i> ..	1,387	1879	" ring—			Helical—		
<i>Chambrier</i> ..	4,428	1879	<i>Bürgin</i> ..	5,085	1879	Werdermann ..	3,156	1874
Joel ..	5,157	1879	Akester ..	5,525	1881	Andrews ..	540	1882
Slater ..	2,272	1880	Chameroy ..	2,295	1882	Immersed in liquid, Millar ..	4,592	1881
Willatt ..	3,808	1880	Conductors, bar, <i>Edison</i> ..	1,139	1882	Longitudinal coils, with—		
Niaudet and Reynier ..	3,971	1880	" silver wire, Thompson ..	4,988	1878	<i>Sohgnac</i> ..	740	1882
<i>Eténe</i> ..	48	1881	Cooling by water, Elmore ..	3,832	1880	Brockie ..	756	1882
Waller ..	803	1881	Core of—			Spagnoletti ..	869	1882
<i>De Meritens</i> ..	2,212	1881	<i>Siemens and Altenek</i> ..	2,006	1873	Machine for winding annular, <i>Haase and Recker</i> ..	3,832	1881
<i>Lachaussee</i> ..	2,761	1881	<i>Weston</i> ..	*4,903	1877	Manufacture of, <i>Dion</i> ..	3,880	1881
<i>Mignon and Rouart</i> ..	3,400	1881	<i>Siemens and Altenek</i> ..	3,134	1878	Mounting—		
			Ward ..	3,976	1878	Thomson ..	5,668	1881
			Heinrichs ..	4,589	1879	Brougham ..	2,044	1882
			Perry ..	1,178	1880	<i>Wood</i> ..	2,531	1882
			Edison ..	1,385	1880	Multiplex—		
			<i>Zipernowsky</i> ..	1,580	1880	Werdermann ..	3,156	1874
			Gumpel ..	253	1881	Kennedy ..	4,541	1881
			<i>Jurgensen and Lorenz</i> ..	2,416	1881	Multiple pole—		
			<i>Gülcher</i> ..	64	1882	Heinrichs ..	4,595	1878
			Henley ..	130	1882	<i>Bertin and De Mersanne</i> ..	5,076	1878
			<i>Sheridan</i> ..	931	1882	Brain ..	5,139	1878
			Brockie ..	756	1882	Rapieff ..	211	1879
			Jarman ..	2,565	1882	Dubos ..	749	1879
			Sperry ..	3,025	1882	Sellon and Edmunds ..	1,949	1879
			Ayrton and Perry ..	3,036	1882	Elmore ..	3,565	1879
			Core, brass, <i>De Meritens</i> ..	3,658	1878	<i>Lamar</i> ..	4,696	1870
			" hollow ring containing the conductor, Farquharson ..	2,771	1882	Werdermann ..	79	1880
			Core, movable, <i>Schuyler and Waterhouse</i> ..	3,002	1882	<i>Cance</i> ..	4,005	1880
			Core, non-magnetic, <i>Siemens and Altenek</i> ..	3,134	1878	Biloret and Mora ..	4,049	1880
						Hopkinson and Muirhead ..	4,886	1889
						Henley ..	5,137	1880
						Gordon ..	78	1881
						Wilde ..	497	1881

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BATTERIES, Secondary—		No.	Year	CABLES, Electric—		No.	Year	CABLES, Electric—		No.	Year
Electrolytes for,				Clark		361	1882	Manufacturing,			
Cuttris		2,135	1882	Telegraph, Henley		386	1882	Heinrichs		4,589	1879
Emmens		2,349	1882	CANDLES, Electric—				Manufacturing hollow or		3,402	1881
Varley		2,776	1882	Jablochkoff		3,552	1876	cored, <i>Mignon and Rouart</i>			
Gas—				Werdermann		4,805	1876	Manufacturing, press for,		2,402	1879
Biggs and Beaumont		5,198	1881	Jablochkoff		494	1877	Edison			
<i>Morel</i>		185	1882	Wilde		3,250	1878	Measuring resistance of,		1,079	1882
Williams		856	1882	De Meritens		178	1879	Crookes			
"		2,558	1882	<i>Jablochkoff</i>		1,175	1879	Saturated with hydro-		5,396	1881
Westphal		2,823	1882	<i>De Meritens</i>		2,339	1879	carbon, Varley			
Gulcher		2,875	1882	Gatehouse		4,796	1879	Testing apparatus for,		1,288	1882
Lead fibres for, <i>Eaton</i>		2,826	1882	Berly		1,027	1881	Rogers			
Portable—				"		1,236	1881	Thickening, at junction			
Sellon		4,632	1881	<i>Williams</i>		224	1882	with conductors, Lane-		1,647	1882
Gumpel		2,756	1882	Disc form, Andrews		418	1879	Fox		803	1881
Preparing lead for—				Holder, Denarouse		3,170	1879	Spiral, Waller		2,199	1879
Boys		1,946	1882	In vacuum, Blamires		455	1880	With wick, glass, <i>Siemens</i>			
Boggett		2,595	1882	Relighting, <i>Jablochkoff</i>		1,175	1879	" metallic, De		2,543	1879
Preventing reverse current				With clockwork, Jabloch-		3,552	1876	Hamel		803	1881
entering, Munro		1,626	1882	koff				Zig-zag, Waller			
Pyramidal-shaped cells,				CARBONS (See also "Electrodes," "In-				CELL—			
<i>Faine</i>		1,676	1881	candescence Lamps, Filaments				Electro-plating, <i>Edison</i>		768	1881
Separate discharging electro-				Monckton		4,597	1876	Porous carbon for, Varley		2,776	1882
des for, Williams		2,558	1882	Prosser and Moore		2,585	1877	Cement, composition of,			
Small, fed by large, Rogers		1,999	1882	<i>Reynier</i>		2,982	1877	for mounting filaments,		2,452	1882
Regulating current from—				"		471	1878	Nathomb			
Thomson		3,032	1881	Scott		861	1878	Chandeliers for electric lamps,		1,802	1881
De Kabath		4,060	1881	<i>Brush</i>		2,003	1878	<i>Edison</i>		2,660	1882
<i>Edison</i>		4,553	1881	Gray		4,553	1878	CIRCUITS—			
Williams		2,558	1882	Punshon		5,105	1878	Automatically opening,		2,402	1879
Vessels for—				Freeman		5,307	1878	Edison			
<i>Faure</i>		1,760	1882	Cohne		277	1879	Closer and breaker, Me-		4,903	1877
Parker and Elwell		2,917	1882	<i>Jamin</i>		863	1879	chanical, <i>Weston</i>		346	1882
Battery, thermo-electric,				Thompson		1,622	1879	Preventing static charge in			
<i>Faure</i>		2,946	1875	De Hamel		2,543	1879	lighting, Crompton			
BRAKE, Electric—				Werdermann		304	1881	Coils, forming, Clarke and		1,483	1882
<i>Lontin</i>		3,264	1876	Lorran		2,848	1881	Leigh			
Winter		3,146	1881	<i>Bouteilloux and Laing</i>		3,214	1881	COILS, Induction (See "Gene-			
BRUSHES, Commutator—				James and Lee		4,396	1881	rator, Secondary;" and			
Schuckert		960	1879	<i>De Changy</i>		4,405	1881	" Induction Coil.")			
Gumpel		3,041	1880	Allport and Punshon		4,850	1881	Insulating, Dion		3,880	1881
Hopkinson and Muir-				Liveing and Boys		69	1882	Intensity, Monckton		4,597	1876
head		4,886	1880	Munro		1,626	1882	Ruhmkorff, De Sussex		465	1879
André		5,268	1880	Smith		1,465	1882	COLLECTORS, Current (See also			
<i>De Meritens</i>		4,207	1881	Maxim		1,619	1882	" Commutator.")			
Gordon		2,871	1882	Hallet		2,560	1882	Cochrane		4,313	1878
<i>Edison</i>		2,804	1881	Varley		2,776	1882	Liveing		4,833	1880
Gumpel		253	1881	Wilkinson		3,003	1882	Parker and Elwell		2,917	1882
Double, Schuyler and				<i>Vogel</i>		3,033	1882	Disc running in mercury,			
Waterhouse		3,002	1882	Adjusting resistance of—				Henley		5,137	1880
Embracing nearly the whole				Crookes		1,079	1882	COMMUTATOR (See also "Collectors,			
of the commutator, Rai-				Hallet		2,560	1882	Current," and "Switches.")			
son		169	1882	Circular, Heinrichs		4,608	1880	<i>Siemens and Altmack</i>		2,006	1873
Holders for—				Combined at ends with				<i>Wallace</i>		2,015	1873
Hallett		2,573	1882	pyrotechnic composition,				Stone		94	1874
<i>La Cie. Electrique</i>		2,990	1882	<i>Holcombe</i>		1,384	1881	Monckton		265	1874
Inclined, Edison		1,385	1880	Combined with liquid car-				De Mersanne		1,446	1874
Isolated, breaking contact,				bonaceous substance,		630	1880	Werdermann		3,156	1874
<i>Edison</i>		3,231	1881	Brougham		2,020	1882	Monckton		3,509	1874
Mounting—				Concentric, Asten		3,402	1881	<i>Lartique</i>		3,771	1874
Heinrichs		4,595	1878	Covered with enamel or				Chutaux		4,454	1874
<i>Weston and Co.</i>		4,960	1878	glass, <i>Mignon and Rouart</i>		3,402	1881	Hussey		2,043	1875
Elphinstone and Vincent				Endless, for incandescence				Clamond		2,205	1875
"		2,893	1880	lamp, Graham and Smith		1,392	1882	Kilner		2,996	1875
Edison		3,964	1880	Flexible—				<i>Fuller and Crandall</i>		3,364	1875
<i>De Meritens</i>		4,207	1881	Harrison		3,470	1878	<i>Carmacho</i>		3,416	1875
Joel		4,607	1881	Punshon		5,105	1878	Edison		3,762	1875
Andrews		540	1882	Holders for—				<i>Paine</i>		4,118	1875
Vincent and Elphinstone				Brush		2,003	1878	<i>Bertin</i>		4,311	1875
Werdermann		2,364	1882	Godfrey		4,718	1879	<i>Lontin</i>		3,264	1876
Ayrton and Perry		2,830	1882	<i>Bouteilloux and Laing</i>		842	1880	<i>Faure</i>		3,670	1876
Gordon		2,871	1882	<i>Berjot</i>		4,428	1880	<i>Weston</i>		4,280	1876
Sperry		3,025	1882	<i>Chertemps</i>		3,349	1881	Monckton		4,597	1876
Mounting automatically ad-				<i>Burgin</i>		4,820	1881	Varley		4,905	1876
justed, <i>Houston and</i>				<i>Waterhouse</i>		5,185	1881	Rapieff		4,432	1877
<i>Thomson</i>		315	1880	Varley		5,396	1881	<i>Weston</i>		4,748	1877
Overlapping two plates,				Hollow, De Hamel		2,543	1879	"		4,903	1877
Weston		4,903	1877	" for arc lamps, <i>King</i>		1,822	1882	Pulvermacher		1,587	1878
Placed at an angle, Willard				" for incandescence				<i>Brush</i>		2,003	1878
Rotary, metallic wire, <i>Be-</i>				lamps—				<i>Siemens and Altmack</i>		3,134	1878
<i>loret and Mora</i>		4,049	1880	Jameson		1,670	1882	<i>De Meritens</i>		3,658	1878
Rotating—				<i>Cruto</i>		1,895	1882	Ward		3,976	1878
Varley		5,667	1881	Increasing conductivity of,				Heinrichs		4,595	1878
Thomson		5,668	1881	<i>King</i>		1,822	1882	Melhado		4,699	1878
Subsidiary, Joel		4,607	1881	Insulated on three sides,				Sprague		4,762	1878
Two for each polar field,				Gibbs		4,533	1881	<i>Weston Co.</i>		4,960	1878
Andrews		540	1882	Joining, Siemens		3,315	1878	Rapieff		211	1879
Electric hair, Ashworth		454	1882	" to form con-				Formby		565	1879
CABLES, ELECTRIC (See also "Con-				tinuous, Siemens		4,614	1880	Keith		1,387	1879
ductors, Compound.")				Manufacturing—				Edison		2,402	1879
<i>Delany</i>		333	1882	Stuar.-Wortley		3,656	1878	<i>Houston and Thomson</i>		4,400	1879

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CONDUCTORS—	No.	Year	CONDUCTORS—	No.	Year	CONDUCTORS—	No.	Year
Insulating,			Jointing,			Protective composition for,		
Wilkinson	3,083	1873	Truman	94	1874	Watson	390	1879
Hooper	3,780	1873	Eustace	3,172	1874	Restoring insulating ma-		
Hooper and Dunlop ..	3,997	1873	Tinmins	3,800	1874	terial for, <i>Clark</i> ..	229	1881
Madsen	4,167	1873	Smith	4,311	1875	Rails as—		
Rubery	4,193	1873	Hibell	4,159	1876	D'Arras	1,000	1873
Truman	94	1874	Phillips	3,603	1878	Siemens	583	1880
Monckton	265	1874	Woods	3,971	1878	<i>Gassett and Fisher</i> ..	3,768	1881
Walker	293	1874	<i>Alberger and Pettit</i> ..	4,601	1878	Rail for receiving composite,		
Macintosh	447	1874	Sheldon	2,397	1879	<i>Humbelle</i>	1,856	1881
Zanni	1,855	1874	Blondot and Bourdin ..	2,629	1879	Sheathing—		
Conybeare and Naphegyi	2,106	1874	Young	3,368	1879	Rowett	2,077	1873
Ewen and James	1,719	1875	<i>Arbogast and McTighe</i> ..	3,778	1879	Moseley	2,969	1873
Field and Talling	1,938	1875	Crighton	4,189	1879	Wilkinson	3,083	1873
Greening	2,059	1875	Allen	2,215	1881	Rowett	4,079	1873
Lackersteen	3,666	1875	Crompton	5,080	1881	Madsen	4,167	1873
<i>Danckwerth</i>	1,704	1876	Brewtnall	5,228	1881	Monckton	265	1874
Henley	1,944	1876	Culbertson and Brown ..	5,615	1881	Bullivant	1,159	1874
Deiss and Scaife	2,866	1876	Bremner	1,345	1882	Highton	3,006	1874
Strickler	3,099	1876	Laminated, Spalding ..	1,196	1878	Lucas	2,564	1875
<i>Menier</i>	4,705	1876	Laying underground (See "Con-			Lackersteen	3,666	1875
Beckingsale	555	1877	ductors, Conduits for.")			Henley	4,115	1875
Henley	833	1877	<i>Radde</i>	2,091	1873	<i>Johnson and Phillips</i> ..	3,533	1876
<i>Brooks</i>	4,824	1877	Gray	3,862	1873	Gollner	131	1878
Truman	375	1878	<i>Waters</i>	862	1874	Siemens	251	1878
Wiebe	767	1878	Prall	979	1874	Clifford	312	1878
Abbott	1,937	1878	Newton	1,569	1876	Truman	375	1878
Berthoud and Borel ..	4,346	1878	Henley	1,944	1876	Berthoud and Borel ..	4,346	1878
Truman	4,438	1878	O'Neill	4,380	1876	<i>Alberger and Pettit</i> ..	4,601	1878
Moseley	307	1879	Baggeley	166	1877	Moseley	307	1879
Jack and Greening ..	718	1879	Russell and Wilson ..	687	1877	Blondot and Bourdin ..	2,629	1879
Haymen	959	1879	<i>Brooks</i>	4,824	1877	Wilkinson	3,472	1879
Blondot and Bourdin ..	2,629	1879	Lane-Fox	3,988	1878	<i>Eaton</i>	751	1880
Spence	2,706	1879	Lucas	5,270	1878	<i>Delany and Johnson</i> ..	2,532	1881
Moseley	3,001	1879	Pierson	5,321	1878	Hooper	2,944	1881
Wilkinson	3,472	1879	Edison	2,402	1879	<i>Delany and Johnson</i> ..	4,093	1881
<i>Arbogast and McTighe</i>	3,778	1879	"	602	1880	<i>Maxim</i>	5,367	1881
Bell	4,549	1879	<i>Eapeut</i>	1,257	1881	<i>Delany</i>	333	1882
Heins	4,916	1879	<i>Bourdin and Maltzof</i> ..	1,474	1881	Henley	386	1882
<i>Eaton</i>	751	1880	<i>Delany</i>	1,809	1881	Jeune	774	1882
Loeffler	905	1880	Mackie	2,542	1881	Mewburn	866	1882
Quin	1,239	1880	<i>Hussey and Dodd</i> ..	2,573	1881	Sheathing, machinery for,		
<i>Knudson and Kane</i> ..	1,295	1880	Detrick	3,388	1881	Glover and James	913	1881
<i>Manty and Philips</i> ..	1,475	1880	Edison	3,483	1881	Sheathing with lead, Har-		
Truman	3,310	1880	Woodward	4,780	1881	rop	485	1874
<i>Jacques</i>	3,424	1880	Gore	4,797	1881	Ships' logs, Massey	3,412	1876
<i>Clark</i>	229	1881	Johnson and Phillips ..	4,885	1881	Spiral, Chutaux	4,454	1874
<i>Sollitdorf</i>	*1,272	1881	Crompton	5,080	1881	Steel, Harvey	369	1877
<i>Delany</i>	1,809	1881	Culbertson and Brown ..	5,615	1881	Steel core and iron cover-		
Sparling	*2,414	1881	<i>Labye and Loch-Labye</i>	5,661	1881	ing, <i>Wheeler</i>	3,021	1879
Mackie	2,542	1881	Laying and insulating in			Strained, for suspending		
Rynyard and Fleming ..	2,807	1881	earthenware blocks, Meyer	232	1882	load, Jenkin	1,830	1882
<i>Henak</i>	4,058	1881	Laying and insulating for			Stretching, during laying,		
Millar	4,592	1881	railways, Varley and Judd	441	1882	<i>Richardson</i>	2,644	1882
Gore	4,797	1881	Laying bare, <i>Richardson</i> ..	2,644	1882	Submarine, protecting, Ken-		
Johnson and Phillips ..	4,885	1881	Laying in conduits, <i>Thomas</i>	1,649	1882	dal	4,674	1880
Abbott and Field	5,407	1881	" in earthenware blocks,			Supports for, <i>Richard</i> ..	2,760	1882
Smith	5,599	1881	Smith	1,132	1882	Supporting aerial, <i>Allison</i>	2,256	1881
Culbertson and Brown ..	5,615	1881	Laying in kerbways—			ulating pipes, Dolbear ..	1,368	1882
<i>Labye and Loch-Labye</i>	5,661	1881	White and Sears	347	1880	Switch for connecting,		
<i>Thomas and Requa</i> ..	1,336	1882	Townsend	39	1881	<i>Blake</i>	5,096	1881
Shippey and Punshon ..	2,293	1882	Smith	3,975	1881	Swivel for, Bedwell ..	367	1876
Wilkinson	3,003	1882	Wheeler	*1,652	1882	Swivelling, Frotheroe ..	2,725	1876
Insulating, of armature,			Kincaid	2,911	1882	Tightening, Eustace ..	1,766	1874
<i>Edison</i>	3,931	1881	Banta	3,048	1882	Variable section, <i>Edison</i> ..	3,880	1880
Insulating, of electric rail-			Laying in troughs, <i>Bras-</i>			Vulcanising, <i>Clark</i> ..	361	1882
ways, Edison	1,862	1882	<i>seur and Dejaer</i>	4,296	1881	Water employed as, <i>Parod</i>	4,686	1878
Insulating joints of, <i>Knud-</i>			Laying in pipes, <i>Richardson</i>	2,644	1882	Winding or coiling, <i>Haase</i>		
son and Kane	1,295	1880	Multiple, Henley	386	1882	and <i>Recker</i>	3,832	1881
Insulating and laying in			Ornamenting, Bossomaier	2,821	1879	Wound in helical coils,		
earthenware blocks,			and Schwegler	2,821	1879	<i>Gower</i>	814	1880
Meyer	232	1882	Preserving, Saunders and			CONTACT BREAKER (See "Com-		
Insulating and laying for			Jamieson	1,416	1877	mutator.")		
railways, Varley and Judd	441	1882	Preventing decomposition			Automatic, Wilkins	4,306	1879
Insulating machine for (See also			of caoutchouc, &c., <i>Mow-</i>			Contact maker for transform-		
" <i>Insulating Materials.</i> ")			bray	*190	1881	ing continuous into alter-		
James	624	1880	Preventing excess of cur-			nating currents, Williams	700	1882
"	1,333	1880	rent in, Edison	5,306	1878	Contact, securing, in electric		
<i>Clark</i>	2,592	1888	Preventing leakage from, of			railways, <i>Edison</i>	1,862	1882
Insulating material for—			electric railways, <i>Edison</i>	1,862	1882	Contact surfaces, lubricating,		
Mourlot	2,121	1880	Preventing overcharging			Williams	856	1882
<i>Heyer</i>	3,885	1879	in, Williams	1,174	1882	Current wheel, <i>Wallace</i> ..	2,015	1873
Insulating and protecting			Protecting—			CURRENTS—		
for railways, Binko ..	3,073	1882	Zanni	1,855	1874	Alternating, Siemens ..	3,315	1878
Insulating underground,			Phillips and Johnson ..	3,798	1875	Collected in mercury, <i>Cour-</i>		
Gray	3,863	1873	Harrison	3,623	1876	tenay	1,450	1873
Insulating with glass,			Glover	855	1877	Directing, Stern and <i>Byl-</i>		
<i>Alberger and Pettit</i> ..	4,601	1878	Lambert	759	1878	lesby	2,336	1882
Insulated metallic coated,			Lucas	3,464	1881	Distributing (See "Distribut-		
<i>Menier</i>	753	1880	<i>Henet</i>	4,058	1881	ing Currents.")		
Insulation for non-inflam-			Protecting, for railways,					
mable, Phillips	2,571	1882	Binko	3,073	1882			

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CURRENTS—	No.	Year	DISTRIBUTING CURRENTS—	No.	Year	ELECTRIC LIGHT—	No.	Year
Dividing, <i>Société l'Alliance</i> ..	3,743	1877	For electric railways, Edison	3,894	1880	Dispersing, Harrison ..	3,875	1879
Welch ..	4,114	1878	For telephage system, Jenkin ..	1,830	1882	Distributing through rail- way trains, Wier ..	2,557	1882
Shea ..	4,278	1878	In railway trains, Stern and Byllesby ..	2,336	1882	Dividing— Munro ..	4,006	1878
Bell ..	4,403	1878	Maintaining potential con- stant, <i>Maxim</i> ..	1,162	1882	Clark ..	3,991	1878
Thomson ..	4,462	1878	Regulating energy of cur- rent, <i>Levy</i> ..	542	1882	Harrop ..	3,793	1879
Stewart ..	4,466	1878	To sidings and turntables of electrical railways, <i>Edison</i>	1,862	1882	Electrolier for, Berly & Hulett	4,755	1889
Bodmer ..	4,476	1878	Draw vices for erecting over- head conductors, Fletcher	859	1881	From Geissler tube, <i>Facio</i> ..	3,462	1876
Welch ..	4,635	1878	Dynamometer, Electric, Varley ..	4,905	1876	" sparks, De Mersanne	1,446	1874
<i>Sawyer and Man</i> ..	4,705	1878	Dynamometer for indicating E.M.F. in circuit, Edison	33	1880	Globes for— Monckton ..	265	1874
Coke ..	1,012	1879	ELECTRICITY, COLLECTING, Cochrane ..	4,313	1878	<i>Sabatou</i> ..	469	1880
Cook ..	2,769	1879	ELECTRIC LAMP— Clark ..	3,991	1878	Globes for, double, Cadett ..	4,022	1878
Rogers ..	3,809	1880	Kennedy ..	2,629	1882	Motive power for— Birkhead ..	988	1879
Dunstan and Pfankuche	3,655	1881	Circuit to suspended, Rogers	4,855	1881	Dillon ..	1,207	1879
Dividing by mercurial resis- tances, Raworth ..	27	1879	Lighting, Graham ..	3,274	1881	Lambert and Iverneau ..	141	1880
Dynamo-electric, Spalding	1,467	1878	Mining, Graham ..	3,274	1881	Corbett and Lockhead ..	219	1880
Induced, preventing (See also "Conductors, Induction Preventing.")			ELECTRIC LIGHT (See also "Arc and Incandescence Lamps," "Light, Diffusing," "Re- flectors," "Lanterns," "Optical Apparatus.")			Liardet and Donnithorne	5,216	1881
<i>Hussey</i> ..	2,043	1875	Tyler ..	3,985	1878	Preece and James ..	129	1882
Rapieff ..	4,432	1877	Forbes ..	4,116	1878	Mines, <i>De Castro</i> ..	2,943	1878
Intensifying, Rogers ..	3,809	1880	Harrison ..	4,333	1878	Optical apparatus for, Monckton ..	3509	1874
Leakage from, detecting, Raworth ..	27	1879	Mackenzie ..	4,568	1878	Production of, Tambourin	1,235	1881
Measuring (See "Meters.")			Edwards and Normandy	4,611	1878	Regulated by expansion of metal, Siemens ..	2,281	1878
Regulating (See "Regulators.")			De Sussex ..	465	1879	Regulating, Hopkinson ..	3,362	1881
Reversing, Varley ..	4,435	1877	Edison ..	33	1880	System, <i>Sawyer and Man</i>	4,705	1878
CUT-OUTS (See also "Switches.")			Werdermann ..	79	1880	" <i>Avenarius</i> ..	3,025	1880
Reimenschneider and Christensen ..	4,693	1878	Edison ..	602	1880	Supplying definite quantity of air to, André ..	1,507	1880
Automatic— Varley ..	4,435	1877	Gordon ..	1,826	1880	Switches for, automatic, Mackie ..	14	1882
Edison ..	4,226	1878	Ward ..	2,538	1881	Theatrical, Frome and Gibbs	3,416	1880
Edison ..	5,306	1878	Johnson and Phillips	2,635	1881	ELECTRIC LIGHTING— Jablochhoff ..	3,839	1877
André and Easton ..	2,236	1880	Winter ..	3,146	1881	By incandescence lamps, <i>Edison</i> ..	1,943	1881
<i>Gerard-Lescuyer</i> ..	4,792	1881	<i>De Changy</i> ..	4,405	1881	Electric Motors (See "Motors.") " Railway (See "Rail- way, Electric.")		
Munro ..	1,626	1882	Williams ..	560	1882	ELECTRONES (See also "Carbons.")		
Williams ..	2,558	1882	Pritchard ..	2,974	1882	Rapieff ..	4,432	1877
Automatic, for incandescent lamps, Stokes ..	4,283	1878	ELECTRIC LIGHT applied to— Advertisements, Hickisson	2,421	1882	Harrison ..	3,470	1878
DEVIATOR, Varley ..	4,435	1877	Balloons, Kinnear ..	4,684	1881	Stuart-Wortley ..	3,656	1878
Distributing apparatus, De Mersanne ..	1,446	1874	Buoys— <i>Smith, Spruill, and Wood</i>	4,312	1876	Wilson ..	3,912	1878
DISTRIBUTING CURRENTS (See also "Currents, Dividing.")			Roth ..	2,658	1881	Aronson and Farnie ..	4,163	1878
Jablochhoff ..	2,839	1877	Cities, Spalding ..	3,637	1880	Siemens ..	4,208	1878
Armand ..	4,074	1878	Fishing, Allison and Hunter	2,772	1879	Sellon, Ladd, and Ed- munds ..	4,645	1878
Edison ..	4,226	1878	Igniting gas lamps, Bins- wanger ..	2,390	1882	Cohné ..	5,011	1878
Blandy ..	2,060	1879	Locomotives— Harding ..	4,192	1880	Thompson and Earl	5,281	1878
Cook ..	2,769	1879	<i>De Buscher</i> ..	4,812	1881	<i>McCarty and Sellière</i> ..	144	1879
Edison ..	33	1880	Mariner's compasses, Cook	2,717	1874	Harding ..	783	1879
Watson ..	602	1880	Microscopes, <i>Molera and</i> <i>Cetrian</i> ..	1,217	1880	Spence ..	876	1879
<i>Avenarius</i> ..	3,025	1880	Mining, Monckton ..	3,509	1874	Thompson ..	1,622	1879
<i>Edison</i> ..	3,880	1880	Photography— Winter ..	1,264	1877	<i>Desnos</i> ..	2,340	1879
<i>Cabanellas</i> ..	3,964	1880	Warlich ..	2,063	1880	<i>Portier</i> ..	3,355	1879
<i>Gülcher</i> ..	200	1881	Quarrying, Werdermann ..	1,438	1874	Harrison ..	3,875	1879
<i>Gülcher</i> ..	2,038	1881	Railway trains— <i>Tommasi</i> ..	4,057	1881	<i>De Changy</i> ..	4,405	1881
<i>Edison</i> ..	2,482	1881	<i>De Changy</i> ..	4,582	1881	Williams ..	766	1882
<i>Hussey and Dodd</i> ..	2,573	1881	Laybourne ..	5,316	1881	Gaseous, Wilson ..	3,912	1878
<i>Gravier</i> ..	2,739	1881	Signalling— Starr ..	819	1882	Hollow, <i>Jablochhoff</i>	3,552	1876
Winter ..	3,116	1881	<i>De Mersanne</i> ..	2,787	1875	" Grant and Sennett	2,267	1879
<i>Edison</i> ..	4,034	1881	Moritz ..	4,636	1876	Inclined, <i>Siemens and Alte- neck</i> ..	3,134	1878
<i>Deprez and Carpentier</i>	4,128	1881	<i>Haskins</i> ..	3,016	1878	Inclined carbons, <i>Gerard- Lescuyer</i> ..	1,552	1880
<i>Parod</i> ..	4,508	1881	Shippey ..	879	1881	Metal coated with carbon, Zanni ..	2,741	1882
<i>Edison</i> ..	4,571	1881	<i>Jennings</i> ..	1,699	1881	Plate, Werdermann ..	4,805	1876
Varley ..	5,667	1881	Tyer ..	2,879	1881	Powdered carbon in tubes, Thomson ..	927	1879
Carus-Wilson ..	5,657	1881	Roe ..	3,010	1881	Protecting, Werdermann ..	4,805	1876
Rogers ..	621	1882	Surgery, Monckton ..	265	1874	Refractory material, <i>Siem- ens and Altenek</i> ..	3,134	1878
Williams ..	766	1882	ELECTRIC LIGHT— Arranging, <i>Spalding</i>	65	1881	Rotating— De Mersanne ..	1,416	1874
" ..	856	1882	Combined with gas— <i>Somzée</i> ..	1,852	1881	Whitehouse ..	1,820	1874
" ..	1,174	1882	Courtenay ..	4,659	1881	<i>Marcus</i> ..	4,006	1878
Crossley, Harrison, and Emmott ..	1,327	1882	Discharge between balls, <i>De</i> <i>Meritens</i> ..	5,033	1880	Vibrating— De Mersanne ..	1,446	1874
Williams ..	1,556	1882	Dispersing— <i>Mangin, Lemonnier, and</i> <i>Co.</i> ..	3,425	1879	<i>De Mersanne</i> ..	2,787	1875
Munro ..	1,626	1882			<i>Siemens and Altenek</i> ..	3,134	1878	
Williams ..	2,558	1882			Water cased, Siemens ..	2,110	1879	
By current breakers and con- densers, <i>Sawyer and Man</i>	4,705	1878			Electro-dynamometer, Varley	4,905	1876	
By combined electro-motor and generator, <i>Cabanellas</i>	200	1881			ELECTROLIERS— Berly and Hulett ..	4,755	1880	
By feeding circuits, <i>Edison</i>	3,880	1880			Brougham ..	1,302	1882	
Controlling by arrangement of generators, Perry ..	55	1882			Brewtnall ..	2,934	1882	
Crossing mains connected, <i>Edison</i> ..	3,483	1881						
Detecting leakage, <i>Edison</i> ..	4,571	1881						
Earth return, Vyle ..	5,002	1881						

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	No.	Year		No.	Year		No.	Year
Electro-Magnets (See "Magnets.")			GENERATORS applied to—			GENERATORS, Dynamo-electric—		
Electrometer, Dewar	2,886	1876	Railway signalling,			Weston	4,280	1876
ELECTROMOTIVE FORCE—			Zanni	4,007	1880	Monckton	4,597	1876
Keeping constant, Lane-			Putnam	2,711	1881	Varley	4,905	1876
Fox	3,988	1878	Gary	4,069	1881	"	270	1877
Standards of, Dewar	2,886	1876	"	4,070	1881	Jablochhoff	3,187	1877
ENGINES, Regulating (See also			Johnson	4,966	1881	Rapieff	4,432	1877
"Regulators.")			Brear and Hudson	5,032	1881	Varley	4,435	1877
Andrews	*2,321	1879	Regulating motors, Cook	1,109	1880	Schuckert	4,464	1877
Richardson	288	1881	Securing carriage doors,			Weston	4,748	1877
Levy	542	1882	Meredith	4,707	1878	Lontin and Co.	4,893	1877
Richardson	941	1882	Signal buoys, Barr	455	1881	Weston	*4,903	1877
FIELD MAGNETS (See "Magnets.")			Signalling—			Brush	2,003	1878
FILAMENTS (See also "Incandes-			Balniewicz	2,835	1880	Siemens and Altmann	3,134	1878
cence Lamps, Filaments			Reese	51	1879	Siemens	3,315	1878
for," and "Carbons.")			Speed indicators—			De Meritens	3,658	1878
Compound, for incandes-			Reynolds	515	1874	Ward	3,976	1878
cence lamps, Allport	2,192	1882	Cardew	5,354	1881	Société d'Electricité	4,066	1878
Fucusol, Smith	1,465	1882	Stopping horses, Faucher	2,750	1876	Zanni	4,573	1878
Furfurol, Smith	1,465	1882	Telegraphy—			Heinrichs	4,595	1878
Fuze (See "Safety Fuze.")			Zanni	2,266	1873	Sprague	4,762	1878
GALVANOMETERS—			"	4,277	1873	Pulvermacher	4,844	1878
Sprague	1,558	1873	"	3,762	1875	Weston and Co.	4,960	1878
Ridout	3,003	1876	Henley	333	1877	Bertin and de Meranne	5,076	1878
Pulvermacher	3,782	1876	Lugo	5,352	1880	Brain	5,139	1878
Brasseur and De Sussex	308	1878	Hopkinson and Muirhead	*1,577	1881	Rapieff	211	1879
Pulvermacher	1,587	1878	Telephonic apparatus, Herz	93	1881	Bosfield	523	1879
Obach	3,317	1878	GENERATORS—			Formby	565	1879
Pulvermacher	4,094	1878	Connecting terminals of, to			Dubos	749	1879
Scott	4,140	1878	a condenser, Weston	*4,903	1877	Schuckert	960	1879
Lane-Fox	4,626	1878	Controlling circuit from,			Keith	1,387	1879
Sprague	4,762	1878	Williams	85	1882	Andrews	2,321	1879
Raworth	27	1879	Cooling—			Edison	2,402	1879
Elmore	3,565	1879	Weston	4,748	1877	Elmore	3,565	1879
Glouchoff	478	1880	Werdermann	476	1873	Houston and Thomson	4,400	1879
Sprague	4,454	1881	Cutting out—			Heinrichs	4,589	1879
Carpentier	4,664	1881	Weston	*4,903	1877	Bürgin	5,085	1879
André	4,948	1881	Johnson and Edison	4,621	1880	Joel	5,157	1879
Thomson	5,668	1881	Tommasi	4,057	1881	Werdermann	79	1880
Faure	730	1882	Driven from axles of railways—			Houston and Thomson	315	1880
Tangent, Sprague	1,558	1873	Wiles	65	1873	Fitzgerald	872	1880
With movable coil, Sprague	1,558	1873	Laycock	478	1875	Perry	1,178	1880
Geissler's tube applied to			Davis	4,559	1878	Griscom	1,259	1880
electric light, De Sussex	465	1879	Harding	4,192	1880	Edison	1,385	1880
GENERATORS (See also "Motors,"			Liardet and Donnithorne	5,418	1881	Maxim	1,392	1880
"Armatures," etc.)			Preece and James	129	1882	Zipernowsky	1,580	1880
Higgs	4,206	1878	Rogers	1,390	1882	Slater	2,272	1880
Cochrane	4,313	1878	Starr	819	1882	André	2,764	1880
Dessaigne	4,591	1881	Driving—			Gumpel	3,041	1880
Munro	1,626	1882	Courtenay	1,450	1873	"	3,324	1880
Millar	2,138	1882	Hedges	3,369	1881	Willatt	3,808	1880
Varley	2,148	1882	Tambourin	1,235	1881	Elmore	3,832	1880
"	2,207	1882	Driving from a water motor,			Thompson	3,928	1880
Deity	2,628	1882	Molera and Celrian	299	1879	Edison	3,964	1880
GENERATORS applied to—			Driving gear for, Swallow	2,456	1882	Niaudet and Reynier	3,971	1880
Air compressing machines,			Driving, motive power for—			Cance	4,005	1880
Maden	1,412	1876	Dillon	1,207	1879	Biloret and Mora	4,049	1880
Baths, Borda	1,107	1881	Dove	1,158	1879	Hussey and Dodd	4,265	1880
Curative purposes, Zanni	4,222	1876	Driving motors actuated by			Heinrichs	4,608	1880
Decomposing water, Dering	5,123	1878	fall of sewage, Birk-			Hopkinson and Muirhead	4,886	1880
Electrolytic bath, Marchese	1,884	1882	head	988	1879	Wilde	5,008	1880
decomposition,			Indicator, cessation of cur-			Henley	5,137	1880
Barlow	*1,897	1881	rent from, Hedges	3,369	1881	Gordon	78	1881
Electro-deposition of alu-			Measuring speed of, Thom-			Gumpel	253	1881
minium and magnesium,			son	5,668	1881	Wilde	497	1881
Berthaut	4,087	1879	Mounted on same bedplate			Waller	803	1881
Galvanising iron, Elmore	922	1881	as driving engine, Edison	3,964	1880	Edison	1,240	1881
Gas engines—			Preventing heated bear-			Siemens and Halske	1,447	1881
Otto	1,770	1873	ings in, Williams	1,174	1882	Müller and Levett	1,787	1881
Etève and Lallement	*3,113	1881	Regulating power driving			Gerard-Lescuyer	1,873	1881
Fielding	994	1882	(See also "Engines.")			Higgs	1,961	1881
Hair brush, Ashworth	454	1882	Westinghouse	3,409	1881	Masson	2,013	1881
Heating metals, Williams	*5,742	1881	Thomson	5,668	1881	De Meritens	2,212	1881
Heating wire, Wier	806	1875	Short-circuiting at variation			Hussey and Dodd	2,375	1881
Indicating presence of in-			in speed, Weston	*4,903	1877	Lachaussée	2,761	1881
flammable gas, Liveing	4,833	1880	Supported so as to oscillate,			Edison	2,954	1881
Lighting trains, Starr	5,600	1881	La Cie. Electrique	2,990	1882	Lane-Fox	3,394	1881
Precipitating zinc, Létrange	3,211	1881	With endless chain passing			Mignon and Rouart	3,400	1881
Protecting ships from cor-			through helices, Harrison	886	1880	Moffatt and Chichester	3,441	1881
rosion, Lyte	5,358	1880	GENERATORS, Dynamo-electric—			Arey	3,456	1881
Purifying metals, André	4,053	1877	Wilde	618	1873	Harling and Hartmann	3,472	1881
Railway brakes—			Evans	1,970	1873	Harborow	3,871	1881
Dibbin	4,036	1877	Siemens and Altmann	2,006	1873	Edison	3,932	1881
Bulkeley	4,464	1878	Werdermann	3,156	1874	Fahrig	4,107	1881
Stanford and Milligan	1,563	1880	Lontin	473	1875	De Meritens	4,207	1881
Achard	2,453	1880	Bürgin	3,243	1875	Aylesbury	4,304	1881
Sawiczski	3,464	1881	Fuller and Crandall	3,364	1875	Kennedy	4,541	1881
Duvelius, Goss, Higgs,			Bertin	4,311	1875	Newton	4,559	1881
Merrell, Peck, and			Lontin	386	1876	Joel	4,607	1881
Walter	5,751	1881	Kilner	802	1876	Gordon	5,536	1881
			Fuller and Crandall	1,557	1876	Griscom	5,551	1881
			Zanni	2,821	1876	Gerard-Lescuyer	5,593	1881
			Lontin	3,099	1876	Varley	5,665	1881

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	No.	Year		No.	Year		No.	Year
GENERATORS, Dynamo-electric—			GENERATORS, Dynamo-electric—			GENERATORS, Dynamo-electric, with—		
Thomson	5,668	1881	Exciting by shunt current			Silver wire conductors,		
Richardson .. .	5,681	1881	when starting, Lever .. .	2,092	1882	Thompson	4,988	1878
<i>Étève</i>	48	1881	Exciting alternate current,			Stationary armature—		
<i>Gülicher</i>	64	1882	<i>Meritens</i>	1,136	1880	<i>Weston</i>	*4,903	1877
<i>Williams</i>	85	1882	Indicating reversal of			Chertemps and Dandeu .. .	1,747	1882
Raison	169	1882	polarity, Elmore .. .	3,565	1879	Rogers	1,780	1882
<i>Hussey and Dodd</i> .. .	234	1882	In series, Spalding .. .	1,467	1881	Unchanging polar field, Voice	1,794	1882
Andrews	540	1882	Multiplex—			GENERATORS, Dynamo-electric		
<i>Chubb</i>	761	1882	Aylesbury	4,304	1881	without commutator—		
<i>Lande</i>	838	1882	Akester	5,525	1881	Courtenay	1,450	1873
Spagnoletti	869	1882	On railway axle, Evans .. .	1,970	1873	Lontin	386	1876
<i>Sheridan</i>	931	1882	Preventing reversal of—			<i>Lontin and Co.</i>	4,893	1877
Gravier	943	1882	Edison	2,402	1879	GENERATORS, Electro-magnetic—		
<i>Edison</i>	1,139	1882	Zanni	2,821	1879	Highton	4,277	1873
<i>Gravier</i>	1,211	1882	Müller and Levett .. .	1,787	1881	Wilde	613	1873
Matthews	1,201	1882	Fisher	1,727	1882	Monckton	265	1874
Levey and Lumley .. .	1,249	1882	Stern and Byllesby .. .	2,336	1882	<i>Gramme and d'Ivernois</i>	953	1878
Phillips and Johnson ..	1,247	1882	Regulating current from (<i>See</i>			GENERATORS, Magneto-electric—		
Williams	1,556	1882	also "Regulators.")			Wiles	65	1873
<i>Weston</i>	1,614	1882	<i>Weston</i>	*4,903	1877	Courtenay	1,450	1873
Kennedy	1,640	1882	<i>Brush</i>	849	1880	Tyer	1,845	1873
Piot	1,692	1882	"	1,835	1881	Evans	1,970	1873
Antill	1,787	1882	<i>Langley</i>	4,168	1881	<i>Pope</i>	2,656	1873
Voice	1,794	1882	<i>Edison</i>	4,552	1881	Darlow and Fairfax	3,736	1873
Brougham	2,044	1882	"	1,496	1882	Kilner	2,996	1875
<i>Edison</i>	2,052	1882	"	2,052	1882	<i>Bertin</i>	4,311	1875
Floyd and Kirkland .. .	2,225	1882	Jarman	2,630	1882	Kilner	802	1876
Chameroy	2,295	1882	Chameroy	2,295	1882	Zanni	2,821	1876
Cumine	2,318	1882	Securing armature to hub			<i>Lontin</i>	3,264	1876
Emmens	2,349	1882	and armature coils,			Varley	270	1877
Werdermann	2,364	1882	<i>Wood</i>	2,531	1882	Werdermann	1,329	1877
Williams	2,558	1882	Short-circuiting field coils			Hickley	3,552	1877
Jarman	2,565	1882	of automatically, Raworth	27	1879	<i>Société l'Alliance</i>	3,743	1877
Hallet	2,573	1882	Shunt wound—			Dibbin	4,036	1877
Crompton	2,618	1882	<i>Bertin</i>	4,311	1875	Zanni	4,232	1877
Kennedy	2,629	1882	Varley	4,905	1876	<i>McTighe</i>	162	1878
Fyfe and Main	2,636	1882	<i>Brush</i>	2,003	1878	Wilde	1,228	1878
Blyth and Peebles .. .	2,661	1882	Siemens	4,534	1879	Otro	1,770	1878
<i>Weston</i>	2,694	1882	Unipolar, <i>Siemens and Alte-</i>			<i>De Meritens</i>	3,658	1878
<i>McTighe</i>	2,744	1882	neck	3,134	1878	Verrue	4,237	1878
Chadburn	2,755	1882	Unipolar, duplex—			<i>Gary</i>	805	1879
Farquharson	2,771	1882	Ball	84	1882	Rosebrugh	1,476	1879
Gordon	2,871	1882	Williams	85	1882	Sellon and Edmunds	1,949	1879
<i>Maquaire</i>	2,885	1882	GENERATORS, Dynamo-electric, with—			Joel	5,157	1879
Parker and Elwell .. .	2,917	1882	Armature rolling in field			<i>Glouchoff</i>	478	1880
<i>La Cie. Electrique</i> .. .	2,990	1882	magnets, <i>Bea</i>	3,283	1881	<i>Anders and Watson</i>	1,958	1880
<i>Schuyler and Waterhouse</i>	3,002	1882	Duplicate armatures revol-			<i>Seeley</i>	1,998	1880
Ayrton and Perry	3,036	1882	ving in opposite directions,			<i>Williams, Harrington,</i>		
Alloy for magnet cores of			Stuart	2,232	1882	<i>and Lane</i>	3,539	1881
(<i>See also "Magnets,</i>			Field magnets, permanent			Millar	5,566	1881
<i>Electro."</i>)			and electro, Hallet .. .	2,573	1882	<i>Schuyler and Waterhouse</i>	3,002	1882
Elmore	4,821	1879	Fixed armature and field			Alternating, <i>De Meritens</i> .. .	3,658	1878
Alternate current—			magnets, Henley .. .	130	1882	For telegraphic purposes,		
<i>Siemens and Alte-neck</i> ..	8,134	1878	Internal field—			<i>McTighe</i>	162	1878
Ward	3,976	1878	<i>Weston</i>	*4,903	1877	Regulating, Kilner	2,996	1875
Armature coils, serve also			Pulvermacher	4,844	1878	Tuning fork, Edison	4,226	1878
for induction of mag-			Thomson	5,668	1881	GENERATOR, Magneto-electric,		
netism, <i>Siemens</i>	760	1882	Blyth and Peebles .. .	2,661	1882	with—		
Arrangement of, Edison ..	33	1880	Willard	2,803	1882	Endless chain passing		
Avoiding dead points of,			Internal and external field—			through solenoids, Har-		
<i>Trouvé</i>	4,009	1880	Elphinstone and Vincent ..	332	1879	rison	3,496	1880
Combining two alternate			"	2,893	1880	Movable soft iron rollers,		
current, <i>Depréz and Car-</i>			<i>Jurgensen and Lorenz</i> .. .	2,416	1881	Millar	4,592	1881
<i>pentier</i>	4,128	1881	Vincent and Elphinstone ..	2,340	1882	Revolving permanent mag-		
Compound, Akester	5,525	1881	Sperry	3,025	1882	nets, Henley	5,137	1880
Compound multiple circuit,			Obliquely fixed bobbins,			GENERATOR, Secondary (<i>See also</i>		
<i>Weston Co.</i>	4,960	1878	<i>Jablochhoff</i>	2,769	1882	" <i>Induction."</i>)		
Connecting armature coils			Oppositely rotating field			Rapief	4,432	1877
to commutator, <i>Wood</i> .. .	2,623	1882	and armature, Kelway .. .	2,910	1882	Henley	5,137	1880
Coupling-up, <i>Siemens and</i>			Revolving field—			<i>Gravier</i>	1,211	1882
<i>Alte-neck</i>	3,134	1878	Heinrichs	4,539	1879	Static, <i>Smith</i>	380	1874
Dead points of, avoiding,			Munro	1,626	1882	Static, electro, Varley	270	1877
<i>Trouvé</i>	4,009	1880	Gordon	2,371	1882	GLOBES (<i>See "Electric Light,"</i>		
Duplex (<i>See also "Generator,</i>			Revolving internal field,			" <i>Arc Lamps,"</i> and		
<i>Dynamo Electric, Multi-</i>			<i>Solignac</i>	740	1882	" <i>Incandescence Lamps,</i>		
<i>plex."</i>)			Revolving iron pieces,			<i>Globes for."</i>)		
Heinrichs	4,589	1879	Henley	5,137	1880	Of malleable glass, Prosser	3,466	1875
Henley	130	1882	Revolving iron shell, <i>Stem-</i>			GOVERNORS (<i>See also "Regula-</i>		
Brockie	756	1882	<i>mens</i>	760	1882	tors," etc.)		
<i>Gravier</i>	943	1882	Rotating armature core—			Spalding	1,197	1878
Akester and Barnes .. .	986	1882	Brain	1,616	1882	Jameson	2,613	1881
Williams	1,174	1882	<i>Schuyler and Waterhouse</i>	3,002	1882	For electric motors, Jenkin	1,830	1882
"	1,556	1882	Rotating field and armature—			Wheel for electric motors,		
Voice	1,794	1882	<i>Vogel</i>	4,812	1878	<i>Lamar</i>	4,696	1879
Jarman	2,565	1882	Wiles	644	1879	Governing speed of trains on		
Hallet	2,573	1882	Sellon and Edmunds .. .	1,949	1879	electric railways, <i>Edison</i> .. .	1,862	1882
<i>Maquaire</i>	2,855	1882	Raison	169	1882	Gutta-percha washing ma-		
Duplex unipolar—			Separate exciter on same			chine, Truman	94	1874
Ball	84	1882	shaft, Gordon	78	1881	HEATING—		
Williams	85	1882	Series of armature rings,			Lane-Fox	4,043	1878
Williams	700	1882	Willard	2,803	1882			

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	No.	Year		No.	Year		No.	Year
HEATING—			INCANDESCENCE LAMPS (See			INCANDESCENCE LAMPS, Filaments of—		
<i>Davis</i>	4,407	1878	also "Carbons"			Automatically changing,		
Holophotes—			"Electrodes.")			<i>Jameson</i>	4,439	1881
<i>Wilde</i>	618	1873	Filaments of—			Coating with phosphorous,		
<i>Mangin, Lemonnier, and</i>			<i>Lodighin</i>	91	1873	&c., <i>Barrier and Lavernede</i>	2,425	1882
<i>Co.</i>	3,425	1879	<i>Kosloff</i>	441	1875	Compound, <i>Gatehouse</i> ..	1,400	1882
INCANDESCENCE LAMPS (See also			<i>Konn</i>	970	1875	<i>Salomons</i>	1,580	1882
"Incandescence and			<i>Chauvin, Goizet, and</i>			<i>Allport</i>	2,192	1882
<i>Electric Light," and</i>			<i>Aubrey</i>	2,410	1875	Duplicate—		
<i>"Semi-Incandescence</i>			<i>Lane-Fox</i>	4,043	1878	<i>Edison</i>	3,765	1880
<i>Lamp.")</i>			<i>Pulvermacher</i>	4,180	1878	<i>Sellon and Edmunds</i> ..	1,791	1879
<i>Lodighin</i>	91	1873	<i>Van Choate</i>	4,388	1878	<i>Harrison</i>	4,478	1881
<i>Kosloff</i>	2,767	1875	<i>Edison</i>	4,502	1878	Enclosed in refractory cas-		
<i>Lane-Fox</i>	3,988	1878	<i>Sprague</i>	4,662	1878	ing, <i>Tyler</i>	4,575	1878
<i>Marcus</i>	4,006	1878	<i>Scott</i>	4,671	1878	Endless, <i>Graham and Smith</i>	1,392	1882
<i>Edwards and Normandy</i>	4,611	1878	<i>Pulvermacher</i>	4,774	1878	<i>Gauging, Evans</i>	1,225	1882
<i>Scott</i>	4,671	1878	<i>Edison</i>	5,306	1878	<i>Graphite, Konn</i>	970	1875
<i>Werdermann</i>	79	1880	<i>Lane-Fox</i>	1,122	1879	Having extended surfaces—		
<i>Apps</i>	264	1881	<i>Edison</i>	4,576	1879	<i>Williams</i>	2,558	1882
<i>Edison</i>	792	1881	"	5,127	1879	<i>Hollow, Jameson</i>	1,670	1882
<i>Lane-Fox</i>	1,543	1881	<i>Clark</i>	203	1880	<i>Iridium</i> —		
<i>Hallet</i>	4,017	1881	<i>Swan</i>	250	1880	<i>Pfannkuche</i>	2,845	1882
<i>Wright</i>	4,778	1881	<i>Edison</i>	578	1880	<i>Gordon</i>	4,745	1880
<i>Gaulard and Gibbs</i>	4,942	1881	<i>Maxim</i>	1,649	1880	<i>Liquid, Williams</i>	5,229	1881
<i>Williams</i>	5,229	1881	<i>Clingman</i>	1,840	1880	Mounting—		
"	5,233	1881	<i>Lane-Fox</i>	3,494	1880	<i>Pulvermacher</i>	4,180	1878
<i>Living and Boys</i>	69	1882	<i>Edison</i>	3,765	1880	"	4,774	1878
<i>Williams</i>	224	1882	<i>Gordon</i>	4,745	1880	<i>Lane-Fox</i>	1,122	1879
<i>Aronson</i>	359	1882	<i>Swan</i>	4,933	1880	<i>Edison</i>	4,576	1879
<i>Wright and Mackie</i>	1,029	1882	"	5,014	1880	"	5,127	1879
<i>Crookes</i>	1,079	1882	<i>Fitzgerald</i>	5,275	1880	<i>Swan</i>	250	1880
<i>Wauthier</i>	1,172	1882	<i>Muirhead and Hopkinson</i>	153	1881	<i>Edison</i>	578	1880
<i>Rogers</i>	1,283	1882	<i>Gordon</i>	225	1881	<i>Guest</i>	925	1880
<i>Rapieff</i>	2,136	1882	<i>Lane-Fox</i>	562	1881	<i>Maxim</i>	1,649	1880
<i>Stuart</i>	2,233	1882	<i>Edison</i>	639	1881	<i>Clingman</i>	1,840	1880
<i>Williams</i>	2,558	1882	<i>Maxim</i>	1,122	1881	<i>Drew</i>	2,037	1880
<i>Hallet</i>	2,560	1882	<i>Scott and Akester</i>	1,422	1881	<i>Lane-Fox</i>	3,494	1880
Applied under water, <i>Chau-</i>	2,410	1875	<i>Crookes</i>	1,422	1881	<i>Edison</i>	3,765	1880
<i>vin, Goizet, and Aubrey</i>			<i>Société la Force et la</i>			<i>Swan</i>	4,933	1880
Arranged in shunt circuit			<i>Lumière, &c.</i>	1,653	1881	"	5,014	1880
of arc lamp, <i>Gatehouse</i>			<i>Edison</i>	1,913	1881	<i>Fitzgerald</i>	5,275	1880
and <i>Kempe</i>	2,569	1882	"	2,492	1881	<i>Muirhead and Hopkinson</i>	153	1881
Arranging in circuit, <i>Cook</i>	2,769	1879	<i>Crookes</i>	2,612	1881	<i>Lane-Fox</i>	225	1881
Arranging, having different			<i>Courtenay</i>	2,770	1881	<i>Edison</i>	539	1881
resistance in same circuit,			<i>André and Easton</i>	2,883	1881	"	562	1881
<i>Edison</i>	3,765	1880	<i>Lane-Fox</i>	3,122	1881	"	768	1881
Brackets for, <i>Maxim</i>	3,189	1881	<i>Gatehouse</i>	3,240	1881	<i>Gimingham</i>	2,079	1881
Charged with gas, <i>Lodighin</i>	91	1873	<i>Maxim</i>	3,189	1881	<i>Crookes</i>	2,304	1881
Combined with gas flame—			<i>Wright</i>	3,437	1881	<i>Nichols</i>	3,187	1881
<i>Watson</i>	2,271	1880	<i>Pfannkuche</i>	3,655	1881	<i>Wright</i>	3,435	1881
<i>Courtenay</i>	4,659	1881	<i>Crookes</i>	3,799	1881	<i>Fitzgerald</i>	3,890	1881
<i>Crastin</i>	4,771	1881	<i>Fitzgerald</i>	3,890	1881	<i>Hallet</i>	4,017	1881
Connecting to leads, <i>Adie</i>	1,618	1882	<i>Hallet</i>	4,017	1881	<i>Fox</i>	4,024	1881
"			<i>Swan</i>	4,202	1881	<i>Edison</i>	4,174	1881
Cut-out for automatic (See			<i>Faure</i>	4,311	1881	<i>Gimingham</i>	4,193	1881
also "Cut-Outs" and			<i>Lane-Fox</i>	4,383	1881	<i>Swan</i>	4,202	1881
"Switches.")			<i>Harrison</i>	4,478	1881	<i>Faure</i>	4,311	1881
<i>Edison</i>	2,492	1881	<i>André</i>	4,654	1881	<i>Harrison</i>	4,478	1881
Currents discharged be-			<i>Allport and Punshon</i>	4,850	1881	<i>André</i>	4,654	1881
tween balls, <i>De Meritens</i>	5,033	1880	<i>St. George</i>	4,939	1881	<i>Sennett</i>	5,286	1881
Electrodes fed by mercury			<i>Williams</i>	5,229	1881	<i>Kennedy</i>	5,524	1881
float, <i>Scott</i>	4,671	1878	"	5,233	1881	<i>Living and Boys</i> ..	69	1882
Exhausting (See also "Vacuum			<i>Sennett</i>	5,286	1881	<i>Wright and Mackie</i>	1,029	1882
Pumps")			<i>Kennedy</i>	5,524	1881	<i>Crookes</i>	1,079	1882
<i>Edison</i>	2,402	1879	<i>Williams</i>	224	1882	<i>Woodhouse and Lawson</i>	1,412	1882
<i>Maxim</i>	1,649	1880	<i>Leipmann and Looker</i>	1,036	1882	<i>Akester</i>	1,642	1882
"	4,393	1880	<i>Crookes</i>	1,079	1882	<i>Lane-Fox</i>	1,647	1882
<i>Henley</i>	5,137	1880	<i>Wright and Mackie</i>	1,274	1882	<i>Brougham and Ormiston</i>	1,697	1882
<i>Edison</i>	562	1881	<i>Gatehouse</i>	1,400	1882	<i>Leask</i>	1,803	1882
<i>Crookes</i>	1,422	1881	<i>Woodhouse and Rawson</i>	1,412	1882	<i>Jousselin</i>	2,037	1882
<i>André</i>	4,654	1881	<i>Smith</i>	1,465	1882	<i>Emmens</i>	2,348	1882
<i>Schaeffer</i>	4,294	1881	<i>Salomons</i>	1,580	1882	<i>Barrier and Lavernede</i>	2,425	1882
Exhausting during passage of			<i>Maxim</i>	1,619	1882	<i>Notboub</i>	2,452	1882
current—			<i>Jameson</i>	1,670	1882	<i>Hallet</i>	2,580	1882
<i>Edison</i>	2,402	1879	<i>Cruto</i>	1,895	1882	<i>Bernstein</i>	2,604	1882
<i>Swan</i>	18	1880	<i>Jousselin</i>	2,037	1882	<i>Pfannkuche</i>	2,845	1882
Exhausting residual gas from—			<i>Rapieff</i>	2,136	1882	<i>Swan</i>	2,898	1882
<i>Edison</i>	562	1881	<i>Allport</i>	2,192	1882	<i>Debenham</i>	3,010	1882
<i>Fitzgerald</i>	3,890	1881	<i>Floyd and Probert</i>	2,226	1882	Mounting to allow for ex-		
INCANDESCENCE LAMPS, Con-			<i>Stuart</i>	2,233	1882	pansion, <i>Willard</i> ..	3,042	1882
ductors of—			<i>Siemens</i>	2,348	1882	Multiple—		
<i>Müller</i>	3,711	1881	<i>Barrier and Lavernede</i>	2,425	1882	<i>Kosloff</i>	441	1875
<i>Crookes</i>	3,799	1881	<i>André</i>	2,432	1882	<i>Konn</i>	970	1875
<i>Edison</i>	4,174	1881	<i>Nothomb</i>	2,452	1882	<i>Sprague</i>	4,662	1878
Composition for glass sur-			<i>Williams</i>	2,558	1882	<i>Hussey and Dodd</i>	2,572	1881
rounding, <i>Nichols</i>	5,495	1880	<i>Bernstein</i>	2,604	1882	<i>Maxim</i>	3,189	1881
Covered with glass, <i>Swan</i>	250	1880	<i>Stanley</i>	2,660	1882	<i>Hallet</i>	4,017	1881
<i>Hollow, Schaeffer</i>	4,294	1881	<i>Zanni</i>	2,741	1882	<i>Jameson</i>	4,439	1881
"	2,432	1882	<i>Pfannkuche</i>	2,845	1882	<i>Williams</i>	5,233	1881
Iron, <i>Ward</i>	2,930	1881	<i>Debenham</i>	3,010	1882	<i>Aronson</i>	359	1882
Platinum, <i>Debenham</i>	3,010	1882	<i>Willard</i>	3,042	1882	<i>Andrews</i>	1,324	1882
Preparing metallic, <i>Swan</i>	2,898	1882	<i>Leask and Smith</i> ..	3,099	1882	<i>Floyd and Probert</i>	2,226	1882

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INCANDESCENCE LAMPS, Filaments of—	No.	Year	INCANDESCENCE LAMPS, Globes of—	No.	Year	INDUCTION—	No.	Year
Multiple,			Sealing,			Apparatus,		
Emmens	2,348	1882	Joussellin	2,037	1882	Bright	4,219	1878
Barrier and Lavernede	2,425	1882	INCANDESCENCE LAMPS—			Fuller	5,183	1878
Nothomb	2,452	1882	Holders for,			<i>De Meritens</i>	5,257	1878
<i>Hussey and Dodd</i>	2,572	1881	Edison	578	1880	Courtenay	3,543	1879
Phosphorescent, Bernstein	2,604	1882	Edison	1,802	1881	Apparatus for regulating		
Platinised, Muirhead and			Graham	5,618	1881	current, Hopkinson	3,362	1881
Hopkinson	153	1881	Swan	5,702	1881	Apparatus, coiling conduc-		
Platinum and carbon, Gate-			Johnson	1,094	1882	tors for, Clark and Leigh	3,652	1881
house	3,240	1881	Rogers	1,288	1882	Applied to electric lighting,		
Reducing resistance of, Scott	4,671	1878	Woodhouse and Rawson	1,412	1882	Edwards and Normandy	4,611	1878
Regulating resistance of—			Rogers	1,618	1882	Coil—		
Maxim	639	1881	Lea	2,186	1882	Jablochhoff	1,996	1877
Crookes	2,612	1881	Defries	2,335	1882	St. George	2,193	1878
Lane-Fox	4,383	1881	Emmens	2,343	1882	Harrison	2,470	1878
Regulating resistance of,			André	2,432	1882	Thompson	4,983	1878
automatically, Welch	4,689	1878	Hallet	2,560	1882	<i>Marx, Aklem, Kayser,</i>		
Replaceable—			Debenham	3,018	1882	and <i>Tiedel</i>	351	1880
Guest	925	1880	Lanterns for (<i>See also "Lanterns."</i>)			Clarke and Leigh	245	1881
Edison	3,765	1880	Graham	3,274	1881	Jacobson	3,053	1881
Maxim	4,393	1880	Lighting by—			Coil, winding, Grumpel	3,041	1880
<i>Faure</i>	4,311	1881	Edison	3,894	1880	Preventing, in conductors,		
Liveing and Boys	69	1882	"	1,943	1881	<i>Lugo</i>	1,119	1881
Lane	2,752	1882	Manometer for, Fitzgerald	3,890	1881	Insulating cast iron, Shedlock		
Straight, Upton	1,232	1881	Manufacture of—			conductors (<i>See</i>		
Thickening, Lane-Fox	225	1881	Edison	2,492	1881	" <i>Conductors, Insulating</i> ")		
INCANDESCENCE LAMPS—			Crookes	3,799	1881	Insulating convolutions of		
Fittings for, Brougham	1,302	1882	Brougham and Ormiston	1,697	1882	coils, <i>Dion</i>	3,880	1881
For heating, <i>Lodighin</i>	91	1873	Leak	1,803	1882	INSULATING MATERIALS (<i>See also</i>		
INCANDESCENCE LAMPS, Globes of—			Swan	2,898	1882	" <i>Conductors, Insulating</i> ")		
<i>Drew</i>	2,037	1880	Medical, <i>Nitze</i>	153	1879	Truman	4,438	1878
<i>Maxim</i>	4,393	1880	Mining, <i>Edison</i>	4,174	1881	Sanders and Danckwerth	2,016	1879
<i>Nichols</i>	3,187	1881	Mounting, <i>Hughes</i>	3,180	1881	Wilkinson	3,472	1879
<i>De Changy</i>	4,405	1881	Portable—			<i>Heins</i>	4,916	1879
Aronson	305	1882	<i>Van Tenac</i>	4,206	1875	Mourlot	4,846	1879
Wright and Mackie	1,274	1882	Adie	5,211	1880	Quin	1,239	1880
Salomons	1,580	1882	Regulating (<i>See also "Regu-</i>			<i>Knudson and Kane</i>	1,295	1880
Akester	1,642	1882	<i>lators."</i>)			Mourlot	2,121	1880
Stuart	2,233	1882	Edison	539	1881	Truman	3,310	1880
Swan	2,898	1882	<i>Hussey and Dodd</i>	2,572	1881	<i>Jacques</i>	3,424	1880
Cleaning, Jameson	4,439	1881	Gatehouse	3,240	1881	Shedlock	5,498	1880
Concentric, Beckinsale	2,512	1882	Revolving, Werdermann	79	1880	Fleming	1,762	1881
Containing inert vapour or gas—			Safety device for—			Masson	2,013	1881
Kosloff	441	1875	Fuller	5,183	1878	Callender	4,409	1881
Bright	4,212	1878	Edison	5,306	1878	Woodward	4,780	1881
Scott	4,671	1878	Safety fuse for, <i>Edison</i>	1,802	1881	Fleming	5,309	1881
Clark	203	1880	" with, André	2,432	1882	Allport	493	1882
Fitzgerald	5,275	1880	Sealing (<i>See "Incandescence</i>			Zingler	1,153	1882
Gordon	218	1881	<i>Lamp, Globes of, Sealing."</i>)			Imray	1,516	1882
Rapieff	2,136	1882	Shunting portion of current			Fleming	2,414	1882
Exhausting (<i>See "Incandes-</i>			by, Sellon and Edmunds	1,791	1879	Field	2,480	1882
<i>cence Lamp, Exhausting."</i>)			Switch for (<i>See also "Switches."</i>)			Rhodes and Bingswanger	2,501	1882
Glass for—			Hughes	3,190	1881	Page	2,518	1882
Sellon	5,632	1881	Volk	2,962	1882	Beckinsale	2,532	1882
Debenham	3,010	1882	Switch for, automatic—			Treating waste, <i>Heyer</i>	3,885	1879
Neck of—			Sellon and Edmunds	1,791	1879	INSULATORS—		
Edison	4,174	1881	Swan	4,202	1881	Moseley	2,969	1873
Lea	2,186	1882	Switch for multiple fila-			Pottrell	3,086	1873
Preventing blackening,			ment, <i>Hussey and Dodd</i>	2,572	1881	Capanema	4,171	1873
Edison	2,492	1881	Supplying definite quantity			Sterne	3,974	1874
Preventing heating of, near			of air to, André	1,507	1880	Johnson and Phillips	3,533	1876
conductors, <i>Edison</i>	539	1881	Terminals for, Leak	1,803	1882	Fuller and Fuller	76	1877
Reflecting—			Vacuum pumps for (<i>See</i>			Cordeaux	522	1877
Lorrain	5,738	1881	" <i>Vacuum Pumps."</i>)			Boulton	805	1877
Woodhouse and Rawson	1,412	1882	Ventilating, André	1,507	1880	Kerr	2,527	1877
Waters	1,462	1882	INCANDESCENCE LAMPS with—			Oppenheimer	1,248	1878
Floyd and Probert	2,226	1882	Adjustable carbon shunt,			Brighton	4,696	1878
Sealing—			Gatehouse	3,240	1881	Bloomfield	3,679	1879
Kosloff	441	1875	Automatically fed carbon			Crighton	4,139	1879
Konn	970	1875	rod, <i>Sawyer</i>	3,587	1879	Wells and Gilbert	1,510	1880
<i>Chauvin, Goizet, and</i>			Enclosed gas rendered lumi-			Edwards	1,720	1880
<i>Aubrey</i>	2,410	1875	nous, Werdermann	79	1880	Wells and Gilbert	1,960	1880
Swan	250	1880	Iridium filament and cur-			Gilbert	3,438	1880
Edison	578	1880	rent of air, Gordon	4,745	1880	Fletcher	3,936	1880
Guest	925	1880	Sectional carbon plate, An-			Gilbert	4,507	1881
<i>Maxim</i>	1,649	1880	drews	1,324	1882	Lewis	1,017	1882
<i>Drew</i>	2,037	1880	Small carbons, Graham and			Curtoys	1,851	1882
Lane-Fox	3,494	1880	Smith	1,392	1882	<i>Richards</i>	2,760	1882
Edison	3,765	1880	Two sticks of carbon, Salo-			Attaching conductors to,		
<i>Maxim</i>	4,393	1880	mons	1,580	1882	Edwards	1,720	1880
<i>Nichols</i>	4,495	1880	Incandescence light, Jab-			Intensifying currents, Rogers	3,809	1880
Henley	5,137	1880	lochkeff	1,996	1877	Iodine, obtaining electrolyti-		
Edison	539	1881	India-rubber, curing, Henley	4,115	1875	cally, <i>Reynoso</i>	799	1873
<i>Maxim</i>	3,189	1881	Indicator current, Raworth	27	1879	JABLOCHROFF CANDLE (<i>See</i>		
<i>Nichols</i>	3,187	1881	" speed (<i>See "Speed</i>			" <i>Electric Candle."</i>)		
Gatehouse	3,240	1881	" <i>Indicator."</i>)			LAMPS, ARC (<i>See "Arc Lamps."</i>)		
Wright	3,437	1881	INDUCED CURRENTS (<i>See also</i>			Lamps, arc incandescence		
Fitzgerald	3,890	1881	" <i>Currents, Induced."</i>)			(<i>See "Arc Incandescence</i>		
Foy	4,024	1881	Preventing, <i>Rapieff</i>	4,432	1877	" <i>Lamps."</i>)		
Edison	4,174	1881	INDUCTION (<i>See also "Conductors,</i>			INDUCTION (<i>See also "Conductors,</i>		
<i>Faure</i>	4,311	1881	" <i>Induction in, Preventing."</i>)			" <i>Induction in, Preventing."</i>)		

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	No.	Year		No.	Year		No.	Year
Lamps for candles, Mackenzie	4,568	1878	MAGNETS, Electro—			MAGNETS, Field—		
Lamps, extinguishing electric, Lane-Fox	225	1881	Cores of,			Wilde	497	1881
Lamps, incandescence (See "Incandescence Lamps.")			Werdermann	2,364	1882	Waller	803	1881
Lamps, semi-incandescence (See "Semi-Incandescence Lamps.")			Ayrton and Perry	3,036	1882	Siemens and Halske	1,447	1881
Lamps, street, extinguishing alternate, Mackie	14	1882	Employed as brakes, Groombridge	1,049	1880	Müller and Levett	1,787	1881
LANTERNS (See also "Reflectors" and "Light Diffusing.")			For arc lamp, Ayrton and Perry	2,813	1882	Higgs	1,961	1881
Tilleard	4,317	1878	Machine for winding, Cooke	1,903	1873	De Meritens	2,212	1881
Mangin, Lemonnier, and Co.	3,425	1879	Shunting portion of current from, when armature attracted, André	5,206	1879	Hussey and Dodd	2,375	1881
Sabatou	469	1880	Tubular—			Jurgensen and Lorenz	2,416	1881
Berly and Hulett	4,755	1880	Camacho	3,416	1876	Lachaussee	2,761	1881
Graham	3,073	1881	Werdermann	1,829	1877	Lane-Fox	3,394	1881
Air-tight, Brougham	832	1880	Bell	611	1878	Mignon and Rouart	3,400	1881
For supplying a definite quantity of air, André	1,507	1880	Winding—			Arey	3,456	1881
Submarine, Heinke and Lang	231	1880	Monckton	265	1874	Harling and Hartmann	3,472	1881
Lead, automatically adjusting of brushes, Sperry	3,025	1882	Jablochkoff	836	1876	Fahrig	4,107	1881
LIGHT (See "Lamps," "Reflectors," "Lanterns," and "Holophotes.")			Cance	1,927	1878	De Meritens	4,207	1881
Diffusing—			Bell and Scarlett	4,555	1879	Kennedy	4,541	1881
Partz	3,455	1881	Heinrichs	4,589	1879	Joel	4,607	1881
Wheeler	3,858	1881	Scarlett	1,585	1880	Bürgin	4,819	1881
Locomotive, electric (See also "Railways, Electric.")			Henley	5,137	1880	Piot	4,851	1881
Monckton	265	1874	MAGNETS, Field—			Akester	5,255	1881
Locomotive, electro-magnetic, D'Arras	1,000	1873	Moore and Courtenay	3,078	1873	Gordon	5,536	1881
Locomotive, electric, increasing grip of, Edison	3,894	1880	Evans	1,970	1873	Gerard-Lescuyer	5,593	1881
MAGNETS—			Siemens and Alteenck	2,006	1873	Varley	5,665	1881
Applied to separating metals, Leek and Edwards	2,890	1878	Wallace	2,015	1873	Thomson	5,668	1881
Insulating, Moore and Courtenay	3,078	1873	Stone	94	1874	Richardson	5,681	1881
Preserving from oxidation, Byshe	4,961	1878	Werdermann	3,156	1874	Hussey and Dodd	234	1882
MAGNETS, Electro—			Hussey	2,043	1875	Little	497	1882
Highton	1,178	1873	Paine and Paine	2,049	1875	Salignac	740	1882
Camacho	3,461	1873	Fuller and Crandall	3,364	1875	Lande	838	1882
Stone	94	1874	Lontin	386	1876	Spagnoletti	869	1882
Monckton	3,509	1874	Fuller and Crandall	1,557	1876	Sheridan	931	1882
Courtenay	1,487	1875	Zanni	2,821	1876	Gravier	943	1882
Faulkner	1,800	1875	Monckton	4,587	1876	Matthews	1,201	1882
Hequet	2,564	1875	Varley	4,905	1876	Gravier	1,211	1882
Faure	2,946	1875	Zanni	4,232	1877	Williams	1,556	1882
Smith	3,981	1877	Rapieff	4,432	1877	Munro	1,626	1882
Rapieff	4,432	1877	Varley	4,435	1877	Kennedy	1,640	1882
St. George	2,193	1873	Lontin and Co.	4,893	1877	Piot	1,692	1882
Sprague	4,762	1878	Weston	4,903	1877	Rogers	1,760	1882
Rapieff	211	1879	Cane	1,927	1878	Gerard-Lescuyer	1,878	1882
Dubos	749	1879	Brush	2,003	1878	Edison	2,052	1882
Chambrier	4,428	1879	Siemens and Alteenck	3,134	1878	Floyd and Kirkland	2,225	1882
Perry	1,178	1880	De Meritens	3,658	1878	Cumine	2,318	1882
Gordon	78	1881	Société d'Electricité	4,066	1878	Vincent and Elphinstone	2,340	1882
Apps	264	1881	Higgs	4,206	1878	Emmens	2,349	1882
Lockwood	2,398	1881	Verrue	4,287	1878	Werdermann	2,364	1882
Markoff and de Kabath	4,271	1881	Zanni	4,573	1878	Williams	2,558	1882
Little	497	1882	Heinrichs	4,595	1878	Hallet	2,573	1882
Matthews	1,201	1882	Sprague	4,762	1878	Blyth and Peebles	2,661	1882
Weston	1,611	1882	Pulvermacher	4,844	1878	Chadburn	2,755	1882
Emmens	2,349	1882	Weston Co.	4,960	1878	Farquharson	2,771	1882
Ayrton and Perry	2,613	1882	Bertin and de Mersanne	5,076	1878	Willard	2,803	1882
Gordon	2,871	1882	Brain	5,139	1878	La Cie. Electrique	2,990	1882
Conical, Chislett	87	1873	Rapieff	211	1879	Connecting coils of, Gravier	943	1882
Cores of—			Elphinstone and Vincent	332	1879	Connecting in several circuits, Maquaire	2,885	1882
Chislett	87	1873	Formby	565	1879	Excited by thermopiles, Edison	2,402	1879
Highton	1,178	1873	Dubos	749	1879	Exciting—		
Camacho	3,461	1873	Schuckert	960	1879	Bürgin	5,085	1879
Slater	2,625	1874	Keith	1,387	1879	Elphinstone and Vincent	2,893	1880
Monckton	3,509	1874	Sellon and Edmunds	1,949	1879	Deprez and Carpentier	4,128	1881
Faulkner	1,800	1875	Andrews	2,321	1879	Williams	1,174	1882
Paine and Paine	2,049	1875	Edison	2,402	1879	Maquaire	2,885	1882
Jablochkoff	836	1876	Elmore	3,565	1879	Exciting by shunt circuit of variable, Brush	1,835	1881
Varley	4,435	1877	Houston and Thomson	4,400	1879	Exciting, of alternate current generator, Meritens	1,136	1880
Rapieff	4,432	1877	Heinrichs	4,589	1879	Preventing counter currents in, by slitting, Wilde	5,001	1880
Cance	1,927	1878	Lamar	4,696	1879	Preventing reversal of polarity in, Weston	4,903	1877
De Meritens	3,658	1878	Bürgin	5,085	1879	Rolling, Bear	3,283	1881
Elmore	4,821	1879	Joel	5,157	1879	Shunt wound, Siemens	4,534	1879
Henley	5,137	1880	Werdermann	79	1880	Winding—		
" "	130	1882	Houston and Thomson	315	1880	Cabanelas	200	1881
La Cie. Electrique	2,990	1882	Glouchoff	478	1880	Ayrton and Perry	3,636	1882
			Fitzgerald	872	1880	McLighe	2,744	1882
			Zipernowsky	1,580	1880	MAGNETS, Permanent—		
			Seely	1,998	1880	Monckton	3,509	1874
			Slater	2,272	1880	Sprague	4,762	1873
			Gumpel	3,041	1880	De Meritens	4,207	1881
			Thompson	3,928	1880	Kotyra	3,047	1882
			Niaudet and Reynier	3,970	1880	Compound—		
			Cance	4,005	1880	Fontaine	1,180	1873
			Biloret and Mora	4,049	1880	Fritchard	2,816	1878
			Hussey and Dodd	4,265	1880	MAGNET POLES—		
			Heinrichs	4,608	1880	Moore and Courtenay	3,078	1873
			Hopkinson and Muirhead	4,886	1880	Monckton	265	1874
			Henley	5,137	1880	" "	3,509	1874
			Eteve	48	1881			
			Gordon	78	1881			
			Gumpel	253	1881			

MAGNET POLES—	No.	Year	METERS, Current—	No.	Year	MOTORS, Electric—	No.	Year
<i>Fuller and Crandall</i> ..	3,364	1875	Lamp hour,			<i>Fonvielle</i> ..	1,339	1880
<i>Bastet</i> ..	1,931	1876	Swan ..	5,499	1881	Edison ..	1,385	1880
<i>Lontin</i> ..	3,264	1876	Measuring relative intensity			<i>Edison</i> ..	3,894	1880
<i>Faure</i> ..	3,670	1876	of two currents, <i>Carpentier</i> ..	4,664	1881	"	3,964	1880
<i>Monckton</i> ..	4,597	1876	Motor controlled by electrical apparatus, <i>Hopkinson</i> ..	49	1882	<i>Kuhlo</i> ..	4,825	1880
<i>Varley</i> ..	4,905	1876	Motor, copper disc, <i>Munro</i> ..	1,626	1882	<i>Henley</i> ..	5,137	1880
<i>Rapieff</i> ..	4,432	1877	" works against a constant resistance—			<i>Richardson</i> ..	2,703	1881
<i>Schuckert</i> ..	4,464	1877	<i>Edison</i> ..	1,016	1881	<i>Hopkinson</i> ..	2,969	1881
<i>Siemens and Alleneck</i> ..	3,134	1878	<i>Ayrton and Perry</i> ..	2,642	1882	<i>Thomson</i> ..	3,032	1881
<i>Ward</i> ..	3,976	1878	Oscillating balance wheel with length of torsional spring controlled, <i>Boys</i> ..	513	1882	<i>Berthoud, Borel, and Co.</i> ..	4,026	1881
<i>Perry</i> ..	1,178	1880	Regulating current to,			<i>Millar</i> ..	4,592	1881
<i>Griscom</i> ..	1,259	1880	Swan ..	5,499	1881	<i>Bürgin</i> ..	4,819	1881
<i>Moffatt and Chichester</i> ..	3,441	1881	Vibrating armature—			<i>Piot</i> ..	4,851	1881
<i>Edison</i> ..	3,932	1881	<i>Fuller</i> ..	5,183	1878	<i>Raison</i> ..	169	1882
<i>Joel</i> ..	4,607	1881	<i>Boys</i> ..	4,472	1881	<i>Hussey and Dodd</i> ..	234	1882
<i>Gülcher</i> ..	64	1882	<i>Williams</i> ..	1,174	1882	<i>Andrews</i> ..	540	1-82
Magnetic field, regulating intensity of (See "Regulator, Current.")			<i>Ayrton and Perry</i> ..	2,642	1882	<i>Siemens</i> ..	760	1882
<i>Harling and Hartmann</i> ..	3,472	1881	Voltametric—			<i>Williams</i> ..	856	1882
Magnetic field, unipolar, <i>Werdermann</i> ..	3,156	1874	<i>Sprague</i> ..	2,902	1881	<i>Spagnoletti</i> ..	869	1882
Make and break, automatic, <i>Thomson</i> ..	3,032	1881	<i>Edison</i> ..	1,016	1881	<i>Williams</i> ..	1,174	1882
Manometer, <i>Fitzgerald</i> ..	3,890	1881	Swan ..	5,499	1881	<i>Varley</i> ..	2,148	1882
Metals, purifying, <i>André</i> ..	4,053	1877	<i>Blythe and Peebles</i> ..	2,661	1882	<i>Cumine</i> ..	2,318	1882
Metals, purifying molten, <i>Werdermann</i> ..	476	1873	METERS, Electric—			<i>Emmens</i> ..	2,349	1882
Metallic salts, decomposing, <i>Lontin</i> ..	473	1875	Metallic deposit, <i>Sprague</i> ..	2,902	1882	<i>Williams</i> ..	2,558	1882
METERS, Current—			Voltametric, <i>Sprague</i> ..	2,902	1882	<i>Parker and Elwell</i> ..	2,917	1882
<i>Pulvermacher</i> ..	3,782	1876	Meters, electricity, motor controlled by electrical apparatus, <i>Hopkinson</i> ..	49	1882	<i>Ayrton and Perry</i> ..	2,830	1882
<i>Lane-Fox</i> ..	3,988	1878	Meters, electro, <i>Dewar</i> ..	2,886	1876	<i>La Cie. Electric</i> ..	2,990	1882
<i>Bright</i> ..	4,212	1878	METERS, Power, <i>Dewar</i> ..	2,886	1876	MOTORS, Electric, applied to—		
<i>Watson</i> ..	2,271	1880	Clockwork, pendulum of electrically controlled, <i>Ayrton and Perry</i> ..	2,642	1882	Brine evaporation, <i>Biggs</i> ..	2,106	1877
<i>Law</i> ..	4,851	1880	Motor rotates against constant resistance, <i>Ayrton and Perry</i> ..	2,642	1882	Coal cutting, <i>Wilde</i> ..	1,554	1874
<i>Apps</i> ..	264	1881	Mines, exploding gases in, <i>Budenburg and Schäffer</i> ..	4,227	1880	Conveying small packages, <i>White and Hayden</i> ..	473	1881
<i>Sprague</i> ..	4,454	1881	Motive power (See also "Generators.")			Domestic tram, <i>Harmant</i> ..	4,779	1880
<i>Lane-Fox</i> ..	5,651	1881	<i>Dove</i> ..	1,158	1879	Driving drills, <i>Thomson</i> ..	1,393	1881
<i>Thomson</i> ..	5,668	1881	<i>Whiteley</i> ..	1,445	1879	Drills, <i>Stanfield and Clark</i> ..	4,918	1881
<i>Carus-Wilson</i> ..	5,687	1881	<i>Lambert and Inverneau</i> ..	144	1880	Mining, <i>Lemaire-Douchy</i> ..	2,107	1876
Application of, <i>Edison</i> ..	4,571	1881	<i>Corbett and Lockhead</i> ..	219	1880	Musical box, <i>Dudley</i> ..	3,423	1881
Automatically breaking circuit to, <i>Edison</i> ..	4,576	1881	<i>Graddon</i> ..	885	1880	Propellers, <i>Tisandier</i> ..	3,401	1881
Circulating electrolyte in, <i>Sprague</i> ..	2,902	1882	<i>Edison</i> ..	3,964	1880	Railways, <i>Siemens</i> ..	583	1880
Clockwork governed by oscillating armature, <i>Boys</i> ..	4,472	1881	MOTORS, Electric—			Railway brakes, <i>Siemens and Boothby</i> ..	696	1881
Clockwork; pendulum of, controlled by magnets, <i>Ayrton and Perry</i> ..	2,642	1882	<i>D'Aras</i> ..	1,070	1873	Rock drills—		
Clockwork automatically wound up, <i>Boys</i> ..	4,472	1881	<i>Wallace</i> ..	2,015	1875	<i>Jones and Wild</i> ..	5,614	1881
Compensating for changes of temperature, <i>Edison</i> ..	1,783	1881	<i>Gaume</i> ..	2,618	1873	<i>Finch</i> ..	1,110	1879
<i>Sprague</i> ..	4,454	1881	<i>Moore and Courtenay</i> ..	3,078	1873	Sewing machines, <i>Journaux</i> ..	4,518	1881
<i>Edison</i> ..	4,576	1881	<i>Stone</i> ..	94	1874	Tramways, <i>Wigham</i> ..	4,414	1881
<i>Sprague</i> ..	2,902	1882	<i>Monckton</i> ..	265	1874	<i>Teleradiophone, Mercadier</i> ..	3,929	1881
Conductor rotating around a pole, <i>Faure</i> ..	730	1882	<i>Wilde</i> ..	1,554	1874	MOTORS, Electric—		
Electro-depositing—			<i>Monckton</i> ..	3,509	1874	Arranging in current with lamps, <i>Edison</i> ..	4,034	1881
<i>Edison</i> ..	4,226	1878	<i>Chutaux</i> ..	4,454	1874	Communicating power from, <i>Edison</i> ..	3,964	1880
<i>Sprague</i> ..	4,762	1878	<i>Courtenay</i> ..	1,487	1875	<i>Cooling, Little</i> ..	497	1882
<i>Edison</i> ..	4,391	1880	<i>Hussey</i> ..	2,043	1875	Dead points of, avoiding, <i>Troues</i> ..	4,009	1880
" ..	1,016	1881	<i>Faure</i> ..	2,049	1875	Driven by battery with adjustable electrodes, <i>Griscom</i> ..	1,244	1880
" ..	1,783	1881	<i>Camacho</i> ..	3,416	1875	Driving gearing for, <i>Edison</i> ..	1,385	1880
<i>Carus-Wilson</i> ..	4,576	1881	<i>Edison</i> ..	3,762	1875	For obtaining power, <i>Hosmer</i> ..	4,220	1880
<i>Sprague</i> ..	2,902	1882	<i>Kimball</i> ..	3,999	1875	Locomotive, <i>Jenkin</i> ..	1,830	1882
Electro-hydrometric, <i>Sprague</i> ..	4,454	1881	<i>Paine</i> ..	4,118	1875	Maintaining strength of field magnets of, <i>Edison</i> ..	1,862	1882
Endosmose, <i>Carus-Wilson</i> ..	2,954	1882	<i>Bastet</i> ..	1,931	1876	Mechanical starter for, <i>Lamar</i> ..	4,696	1879
Fluid passing through electrically regulated valve, <i>Lane-Fox</i> ..	4,626	1878	<i>Lontin</i> ..	3,264	1876	Multiplex, <i>Chutaux</i> ..	4,454	1874
Freezing of, preventing—			<i>Faure</i> ..	3,670	1876	Obliquely fixed bobbin, <i>Jablotchhoff</i> ..	2,769	1882
<i>Sprague</i> ..	4,454	1881	<i>Monckton</i> ..	4,597	1876	Regulating (See also "Regulators.")		
<i>Edison</i> ..	4,576	1881	<i>Varley</i> ..	4,905	1876	<i>Monckton</i> ..	3,509	1874
Gearing constantly rotated drives through speed changers the registering mechanism—			<i>Lovel</i> ..	732	1877	<i>Paine and Paine</i> ..	2,049	1875
<i>Lane-Fox</i> ..	4,626	1878	<i>Werdermann</i> ..	1,829	1877	<i>Spalding</i> ..	1,197	1878
<i>Carus-Wilson</i> ..	4,824	1881	<i>Smith</i> ..	3,981	1877	<i>Lamar</i> ..	4,696	1879
<i>Varley</i> ..	2,248	1882	<i>Spalding</i> ..	915	1878	<i>Edison</i> ..	33	1880
Indicating charge of secondary batteries, <i>Carus-Wilson</i> ..	5,687	1881	<i>Zanni</i> ..	1,677	1878	<i>Deprez and Carpentier</i> ..	4,128	1881
Lamp hour—			<i>Cance</i> ..	1,927	1878	<i>Langley</i> ..	4,168	1881
<i>Sawyer and Mann</i> ..	4,705	1878	<i>Harding and Bull</i> ..	2,878	1878	<i>Carus-Wilson</i> ..	4,825	1881
<i>Swan</i> ..	5,004	1880	<i>Melhado</i> ..	4,699	1878	<i>Jarman</i> ..	2,630	1882
<i>Pel</i> ..	3,380	1881	<i>Whyte</i> ..	5,152	1878	<i>Ayrton and Perry</i> ..	2,830	1882
			<i>Whiteley</i> ..	1,445	1879	<i>La Cie. Electric</i> ..	2,990	1882
			<i>Heinrichs</i> ..	2,317	1879	Reversing—		
			<i>Edison</i> ..	2,402	1879	<i>Wallace</i> ..	2,015	1873
			<i>Heinrichs</i> ..	4,589	1879	<i>Hopkinson</i> ..	2,481	1879
			<i>Lamar</i> ..	4,696	1879	" ..	4,653	1879
			<i>Glouchoff</i> ..	478	1880	<i>Lamar</i> ..	4,696	1879
			<i>Griscom</i> ..	1,259	1880	<i>Gumpel</i> ..	3,041	1880
						<i>Piot</i> ..	4,851	1881
						<i>Ayrton and Perry</i> ..	2,830	1882
						Supplying current to, <i>Binks</i> ..	3,073	1882

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MOTOR, Electro-magnetic—	No.	Year	REFLECTORS—	No.	Year	REGULATORS, Current—	No.	Year
Ludeke and Thorman	3,338	1878	Williams	766	1882	Radial adjustment of arma-		
North	4,041	1878	Franke	849	1882	ture coils, <i>Maquaire</i>	2,885	1882
Edison	4,518	1878	Wheeler	917	1882	Resistances—		
Little	33	1880	Combined with globe,			Lane-Fox	4,626	1878
MOTOR, Magnetic—			Aronson	305	1882	<i>De Mersanne and Bertin</i>	5,053	1878
Andrews	292	1873	Fitted with coloured shade,			Sellon and Edmunds	1,692	1879
Hosner	311	1873	Grieve	259	1879	Cook	2,769	1879
La Cour	1,988	1878	For incandescence lamp,			Resistance of field magnet		
Hosner	2,930	1878	Lorrain	5,738	1881	circuit of exciter—		
Sueur	3,857	1881	Of silvered glass, <i>Watson</i>	389	1879	Edison	33	1880
MOTOR, Magneto-electric—			Regulating length of arc in			"	602	1880
Ward and Ball	2,033	1878	lamps (See also "Arc			Secondary batteries—		
Hosner	3,676	1878	Lamps.")			Thomson	3,032	1881
OPTICAL APPARATUS (See also			Wood	2,563	1882	De Kabath	4,060	1881
"Reflectors," "Lanterns,"			"	2,570	1882	<i>Edison</i>	4,553	1881
"Holophotes," and "Photo-			REGULATORS, Current—			Varying relative speeds of		
meters.")			Pulvermacher	1,900	1876	motor and generator,		
Weyde	446	1878	"	3,469	1877	<i>Rigaud</i>	3,054	1882
For arc lamp, <i>De Mersanne</i>	3,315	1876	Lane-Fox	4,043	1878	Varying length of arms of		
Oxyhydrogen light, Edwards			Harding	4,047	1878	centrifugal governor, Var-		
and Normandy	4,611	1878	Pulvermacher	4,094	1878	ley	5,665	1881
PERMUTATOR, <i>Wallace</i>	2,015	1878	Scott	4,140	1878	REGULATORS, Current, with—		
Permanent magnets (See "Mag-			Bright	4,212	1878	Centrifugal governor driven		
nets, <i>Permanent</i> .)			Edison	4,226	1878	by motor, Carus-Wilson	4,825	1881
Permanent way for con-			Van Choate	4,388	1878	Rapidly vibrating circuit		
ductors, Meyer	232	1882	<i>Fuller</i>	5,183	1878	controller, <i>Edison</i>	1,496	1882
Phosphor-bronze, Highton	3,006	1874	Blandy	2,060	1879	Tilting cog-bar gearing with		
Phosphorescent filament for			Edison	2,402	1879	one of two pinions,		
incandescence lamps, Bern-			<i>Cabanellas</i>	200	1881	<i>Sawyer and Man</i>	4,705	1878
stein	2,604	1882	Lane-Fox	1,636	1881	REGULATORS—		
Photometer—			Jameson	2,618	1881	Expansion, <i>Lontin</i>	2,094	1877
Bolter and Webber	686	1873	<i>Gravier</i>	2,739	1881	Light—		
Mucklow and Spurge	5,368	1881	Thompson	3,032	1881	<i>Sawyer and Man</i>	4,704	1882
Selenium, Limbeck	4,408	1880	Dunstan and Pfannkuche	3,655	1881	<i>Edison</i>	539	1881
Plating cell, electro, <i>Edison</i>	768	1881	<i>Edison</i>	4,034	1881	Gatehouse	3,240	1881
Polarity, preventing rever-			<i>Deprez and Carpentier</i>	4,128	1881	Resistance, automatic, for		
sal (See also "Switches,			<i>Carod</i>	4,508	1881	incandescence lamps—		
Automatic.")			Carus-Wilson	5,687	1881	Welch	4,689	1878
Weston	4,280	1876	<i>Cruto</i>	1,895	1882	REGULATORS, Speed (See also		
"	4,748	1877	Sperry	3,025	1882	"Motors, Electric, Re-		
"	4,903	1877	<i>Rigaud</i>	3,054	1882	gulating.")		
Stern and Byllesby	2,336	1882	Automatic indicator for			For electric motors—		
Posts for conductors (See also			hand, <i>Edison</i>	1,023	1882	Edison	33	1880
"Conductors.")			Acting on the driving motor—			"	602	1880
Richard	2,760	1882	Lane-Fox	4,626	1878	"	1,385	1880
Power, transmission of (See			<i>Sawyer and Man</i>	4,705	1878	<i>Edison</i>	3,964	1880
"Transmission of Power.")			Andrews	2,321	1879	<i>Deprez and Carpentier</i>	4,128	1881
Pump, mercury (See also			Richardson	288	1881	<i>Langley</i>	4,168	1881
"Vacuum Pumps.")			Westinghouse	3,409	1881	Carus-Wilson	4,825	1881
Akester	2,519	1882	Carus-Wilson	4,825	1881	Jarman	2,630	1882
RAILWAY CARRIAGE DOORS—			Thomson	5,668	1881	Ayrton and Perry	2,830	1882
Securing, Wiles	65	1873	Carus-Wilson	5,687	1881	Jenkin	3,007	1882
RAILWAYS, Electric—			<i>Levy</i>	542	1882	For electric motors, hand		
Monckton	265	1874	Richardson	941	1882	or automatic, <i>Le Cie.</i>		
Haddon	2,040	1879	Adjusting the brushes—			<i>Electrique</i>	2,990	1882
<i>Siemens</i>	583	1880	<i>Edison</i>	1,149	1882	For electric motors driven		
Varley and Judd	441	1882	Wood	2,526	1882	by batteries, <i>Griscom</i>	1,244	1880
<i>Edison</i>	1,863	1882	Adjusting field magnet poles—			For generator, <i>Cabanellas</i>	200	1881
Lighting carriages of—			Chameroy	2,295	1882	For turbines, &c., Williams	1,174	1882
Preece and James	129	1882	Jarman	2,630	1882	Relay, Brasseur and De		
<i>Starr</i>	819	1882	Arrangement of generators,			Sussex	308	1878
Ratchet, electric, <i>Cabanellas</i>	200	1881	Perry	55	1882	Resistances—		
Reflecting refractory block			Coils in circuit, Andrews	2,321	1879	Cadett	4,022	1878
for arc lamps, Harrison	3,559	1881	Exciting current—			Thomson	3,032	1881
REFLECTORS (See also "Optical			<i>Brush</i>	849	1880	Wilkinson	3,003	1882
Apparatus," "Lan-			<i>Maxim</i>	1,392	1880	Binko	3,073	1882
terns.")			<i>Edison</i>	3,964	1880	Resistance balances—		
Weyde	446	1878	<i>Brush</i>	1,835	1881	<i>Abdank</i>	339	1882
Neale	902	1878	<i>Edison</i>	2,482	1881	<i>Roosevelt and Abdank</i>	3,070	1882
Alder and Clarke	1,442	1878	<i>Langley</i>	4,168	1881	Resistances, carbons for,		
<i>De Castro</i>	2,943	1878	<i>Edison</i>	4,552	1881	Varley	2,776	1882
Pulvermacher	4,079	1878	Wright and Ormiston	5,006	1881	Reversal of polarity, prevent-		
Sprague	4,682	1878	<i>De Khotinsky</i>	245	1882	ing (See "Polarity,		
<i>Molera and Celrian</i>	299	1879	Edison	1,191	1882	Preventing Reversal of.")		
Young and Freeman	350	1879	<i>Edison</i>	1,023	1882	RHEOSTATS—		
Weyde	508	1879	For use with gas engines,			Pulvermacher	1,900	1876
Harding	783	1879	Carus-Wilson	5,687	1881	Coxeter	492	1878
Holmes	920	1879	Hand, <i>Edison</i>	1,023	1882	Bright	596	1878
Werdemann	2,301	1879	Induction apparatus, Hop-			Cadett	4,022	1878
<i>Mangin, Lemonnier, and</i>			kinson	3,362	1881	"	4,316	1878
<i>Co.</i>	3,425	1879	Platino-carbon, Gatehouse	1,400	1882	Sellon and Edmunds	1,692	1879
<i>Schumann</i>	2,179	1880	Potential of—			<i>Hadden</i>	3,843	1879
Heinrichs	4,608	1880	<i>Cochrane</i>	4,313	1878	Harrison	3,875	1879
Benson	4,254	1880	<i>Deprez and Carpentier</i>	4,128	1881	<i>Rogier</i>	75	1880
<i>Brush</i>	1,834	1881	<i>Maxim</i>	1,162	1882	<i>Lugo</i>	5,352	1880
<i>Wheeler</i>	3,911	1881	Williams	1,556	1882	Cuff	2,263	1881
Varley	5,396	1881	Potential of, by batteries—			<i>Hussey and Dodd</i>	2,572	1881
Rowan	5,400	1881	Williams	768	1882	<i>Graver</i>	2,739	1881
			"	700	1882	Thomson	3,032	1881
			"	856	1882	Pfannkuche and Dunstan	5,743	1881
			Potential of, from batteries	2,558	1882	Williams	856	1882
						Mumro	1,626	1882

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RHEOSTATS—	No. Year		No. Year	SWITCHES, Automatic—	No. Year
Metallic chain, <i>La Société la Force et la Lumière, &c.</i>	4,496 1881	Speed, measuring, of generators, Thomson	5,608 1881	Berly	1,027 1881
Ruhmkorff's coil, application to electric light, De Sussex	465 1879	Speed regulator (<i>See "Regulators, Speed."</i>)		Edison	2,492 1881
SAFETY FUSE—		Standard of electromotive force, Dewar	2,886 1876	Hussey and Dodd	2,572 1881
<i>Lontin</i>	2,094 1877	Starter, automatic, Edison	2,402 1879	Thomson	3,032 1881
Inserted in main leads, Edison	1,023 1882	Static charge, preventing, in lighting circuits, Crompton	346 1882	SWITCHES, Automatic, for—	
Secondary batteries (<i>See "Batteries."</i>)		SWITCHES—		Cutting changed battery out of circuit, <i>Houston and Thomson</i>	4,400 1879
SEMI-INCANDESCENCE LAMPS (<i>See also "Arc Incandescence Lamps."</i>)		Weston	4,280 1876	Electric lamps, <i>Jablochkoff</i>	725 1880
<i>Sawyer and Man</i>	4,847 1878	<i>Lontin</i>	2,094 1877	Incandescence lamps, Sprague	4,662 1878
<i>De Mersanne and Bertin</i>	5,044 1878	Rapieff	211 1879	Incandescence lamps with multiple filaments, Aronson	359 1882
Rapieff	211 1879	Andrews	2,321 1879	Multiplex lamps, Berly	1,236 1881
Werdermann	2,301 1879	Edison	2,402 1879	Preventing reversal of currents (<i>See also "Polarity, Preventing Reversal of."</i>)	
Joel	5,157 1879	Hedges	3,369 1881	Zanni	2,821 1879
André and Easton	2,236 1880	<i>Faure</i>	129 1881	Fisher	1,727 1882
André	2,764 1880	<i>Hussey and Dodd</i>	2,572 1881	Replacing discharged batteries, <i>Lamar</i>	4,696 1879
Heinrichs	4,608 1880	<i>Gravier</i>	2,739 1881	Secondary batteries, Emmens	2,912 1882
Sachs	894 1881	Williams	856 1882	Semi-incandescence lamp—	
Common and Joel	1,040 1881	Munro	1,626 1882	Werdermann	2,301 1879
Harrison and Blagburn	1,358 1881	Brougham	2,030 1882	Joel	5,157 1879
<i>Société La Force et la Lumière, &c.</i>	1,653 1881	Defries	2,335 1882	Shunting excess of current, Mackie	14 1882
André	2,563 1881	Actuating electrically, Carus-Wilson	5,687 1881	Shunting portion of current when armature attracted, André	5,206 1879
Somzee	4,305 1881	SWITCHES for—		TELERADIOPHONE, Mercadier	3,929 1881
<i>De Changy</i>	4,405 1881	Arc lamp, Joel	5,157 1879	Telpherage, Jenkin	1,830 1882
Rogers	4,855 1881	Gadot	2,344 1881	Trancars, Richardson	2,703 1881
<i>Solignac</i>	740 1882	Wood	2,563 1882	Transmission of power—	
Werdermann	1,444 1882	Breaking circuit at several places, Edison	1,385 1880	Spalding	915 1878
Salomons	1,580 1882	Connecting circuits to earth, Howard	2,896 1882	Chretien and Felix	2,019 1879
Zanni	2,740 1882	Connecting up conductors, Andrews	2,321 1879	Poulet and Commelin	1,046 1880
Automatically short-circuiting (<i>See "Switches, Automatic."</i>)		Incandescence lamp—		Edison	3,894 1880
Joel	5,157 1879	Edison	1,802 1881	Gumpel	253 1871
Automatic switch for, Werdermann	2,301 1879	Hughes	3,190 1881	Hopkinson	2,969 1881
Carbon coils for, Varley	2,776 1882	Berly	1,236 1881	VACUUM PUMPS—	
Feeding carbon to, André and Easton	2,236 1880	Aronson	359 1882	Lane-Fox	3,494 1880
Preventing explosion in, Hedges	4,988 1880	Emmens	2,348 1882	Akester	*4,458 1881
With carbon descending against metallic disc, Hedges	4,988 1880	Hallet	2,560 1882	Stearn	*5,000 1881
With electric motor, André	2,764 1880	Volk	2,962 1882	Kennedy	5,524 1881
With inclined carbons, Rogers	1,922 1881	Regulating currents, Andrews	2,321 1879	<i>Goebel and Kulenkamp</i>	*5,548 1881
With mercury float, Blamires	455 1880	Secondary batteries, <i>Tommasi</i>	252 1882	Sennett	5,286 1881
With multiple carbons, <i>De Mersanne and Bertin</i>	5,044 1878	Short-circuiting lamp, Common and Joel	1,040 1881	Wright and Mackie	1,031 1882
With Torricellian vacuum, Blamires	455 1880	Signalling apparatus, <i>Le-mair and Lebrun</i>	4,081 1880	Rogers	1,288 1882
Short-circuiting, avoiding in armature, <i>Weston</i>	1,614 1882	Successively completing number of circuits, <i>Budenburg and Schäffer</i>	4,227 1880	<i>Cruto</i>	1,895 1882
Shunt, automatic, Scott	4,140 1878	Turning current gradually on to lamps, <i>Sawyer and Man</i>	4,705 1878	Gimingham	2,375 1882
Signals, Electric, for railways—		Operated by compressed air, Berly	1,027 1881	Akester	2,519 1882
<i>Putnam</i>	1,125 1880	SWITCHES, Automatic (<i>See also "Batteries, Secondary, Charging, and Discharging;" "Cuts Outs;" and "Shunts."</i>)		Leask	2,701 1882
Perry and Ayrton	783 1881	Weston	4,748 1877	Vacuum tubes, Scantlebury	1,932 1878
<i>Putnam</i>	2,711 1881	Scott	*4,903 1877	for theatrical effects, Aronson	2,008 1878
<i>D'Auriac</i>	1,683 1881	Edison	4,140 1878	Voltmeters—	
Sparking, preventing at commutator (<i>See "Commutator, Sparking at."</i>)		<i>Sawyer and Man</i>	4,705 1878	Pulvermacher	1,900 1876
Speed Indicators—		Sellon and Edmunds	1,192 1879	<i>Avenarius</i>	3,025 1880
Reynolds	515 1874	<i>Reynier</i>	1,971 1879	WATER—	
Cardew	5,354 1881	Zanni	2,821 1879	Utilising flow of, Williams	1,174 1882
<i>Starr</i>	5,600 1881	Wilkins	4,306 1879	Purifying, Atkins	556 1873
Rogers	1,390 1882	Godfrey	4,718 1879	YARNS—	
		<i>Jablochkoff</i>	725 1880	Rendering non-absorbent—	
				Hooper	3,780 1873
				Hooper and Dunlop	3,997 1873
				ZAPOTINE, Conybeare and Naphegyi	2,106 1874