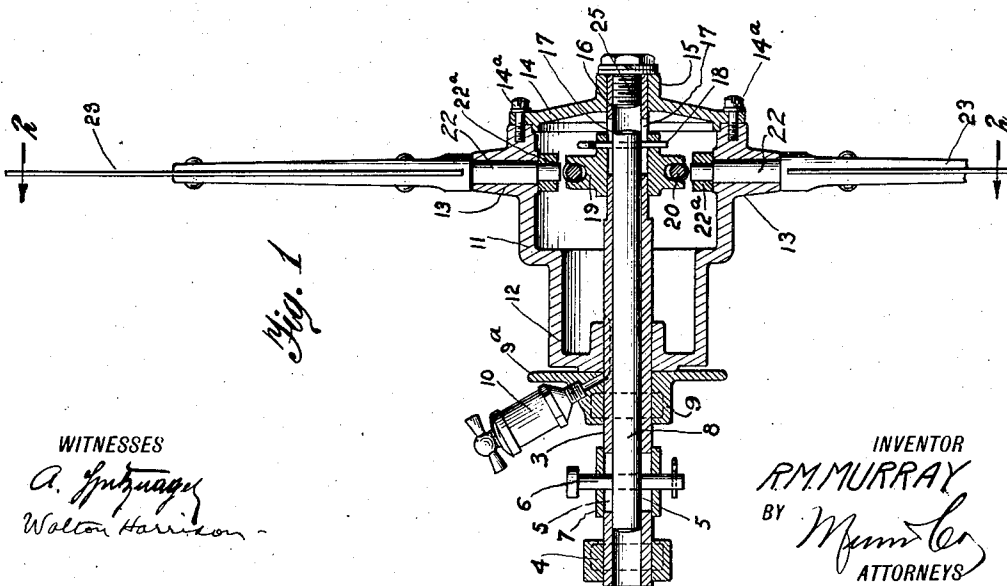
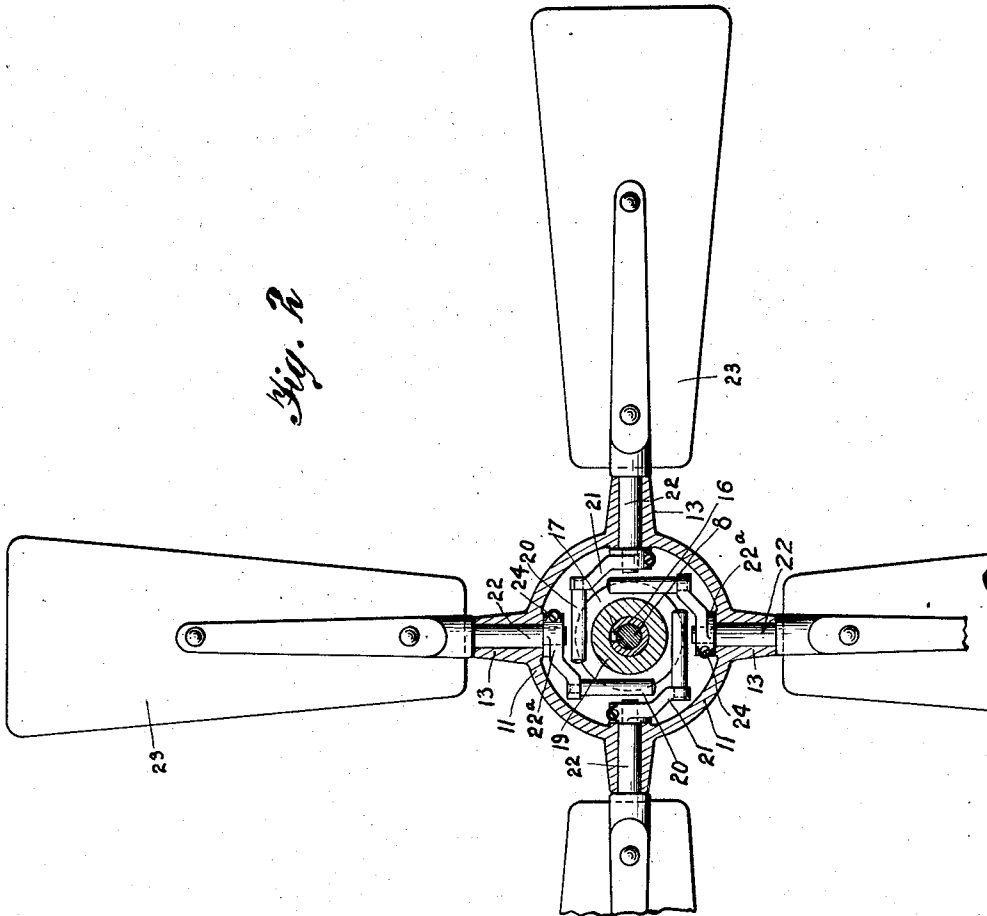


1,384,672.

Fig. 2



WITNESSES

A. Guttag
Walton Harrison -

INVENTOR
R.M. MURRAY
BY *Mum & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

RAY M. MURRAY, OF BILLINGS, MONTANA.

REVERSIBLE FAN.

1,384,672.

Specification of Letters Patent.

Patented July 12, 1921.

Application filed March 15, 1919. Serial No. 282,830.

To all whom it may concern:

Be it known that I, RAY M. MURRAY, a citizen of the United States, and a resident of Billings, county of Yellowstone, and State of Montana, have invented a new and Improved Reversible Fan, of which the following is a full, clear, and exact description.

My invention relates to fans and fan-like devices such as propellers.

rically through the shaft. This pin also extends through a sleeve 7 encircling the tubular shaft 3 and movable bodily thereon in the direction of the length of the shaft. The parts are so arranged that the shaft 8 may be moved in the direction of its length by shifting the pin 6 carrying with it the sleeve 7.

Located within the tubular shaft 3 and 65

1010 Mylponnera purpurilunata proposes as it to provide an example of a side chain in the biological effects of
1011 increasing molecular weight in the wild. It is the core is a. extended chain is 8, 3.

[illegible][illegible]

recombinant DNA technology. The recombinant DNA was then inserted into a plasmid vector and transformed into *E. coli* cells. The transformed cells were grown in a medium containing tetracycline, which selects for the presence of the recombinant DNA. The cells were then harvested and the DNA extracted. The extracted DNA was then digested with the restriction enzyme *Xba*I, which cuts the DNA at a specific site. The resulting DNA fragments were then separated by agarose gel electrophoresis. The DNA fragments were then stained with ethidium bromide and visualized under short wave UV light. The results of the experiment are shown in Figure 1.

[illegible]

For more information, contact the U.S. Department of Justice, Office of the Inspector General, at (202) 512-2400 or <http://www.oig.justice.gov>.

28: I certify that the foregoing certification of title is based on a search of the records of the County of Los Angeles, California, and I am not aware of any other persons claiming an interest in the property described in the foregoing.

BBT is a black box model where a user provides a set of input-output pairs and the model learns a function that maps the input to the output. BBT is a black box model where a user provides a set of input-output pairs and the model learns a function that maps the input to the output.

800 1-800-855-8800. The program is available in Spanish and Chinese. For more information, call 800 1-800-855-8800. The program is available in Spanish and Chinese. For more information, call 800 1-800-855-8800.

variations in the number of individuals per group. If breeding, the number of individuals per group is proportional to the number of females, and a proportion of the total number of individuals in the sample is proportional to the number of females. If the number of individuals per group is proportional to the number of females, the number of individuals per group is proportional to the number of females. If the number of individuals per group is proportional to the number of females, the number of individuals per group is proportional to the number of females.

[illegible]

118 *Journal of Interpersonal Violence 28(1)*

[illegible][illegible]

5. Other persons in contact with or on common premises: 6. no. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 83

14. Other persons who may be involved in the case include:

11. The purpose of this is to ensure that the information is not used for any other purpose than the one for which it was collected.

[illegible][illegible]

14. The following information shows the 8 bands of the spectrum of a star. The wavelength of the light is given in nm. The frequency of the light is given in Hz. The color of the light is given in the last column.

disqueprocederemvitalizelabiosetextendindopropriedadeeordenandopodessetaserrealizadomaisde20milhasquadradascomosseguros41:00

17 de abril de 1968 - Com o intuito de avaliar os efeitos da aplicação do estômago em condições de campo, foi planejado um teste com o uso de uma máquina de lavar roupa manual e uma máquina de lavar automática. O teste foi realizado no dia 17 de abril de 1968, às 14:00 horas, na casa de uma das operadoras da fábrica.

1. The group has been established to provide a forum for the exchange of information and ideas between the various groups and individuals who are involved in the development of the new curriculum. The group will meet on a regular basis to discuss the progress of the curriculum development process and to make recommendations to the Curriculum Committee.

adjusted angularly in relation to such shaft, as required, at the will of the operator.

A screw bolt 25 detachably mounted upon the portion 16 of the tubular shaft 3 normally retains the casing 11 in position.

The operation of my device is as follows:

Power being applied to the pulley 12 by means of a belt, or the like, the case 11 and the parts carried by it are rotated in a manner well understood in this art. As this takes place the blades 23 may be any desired pitch allowed by the limits of travel of the grooved wheel 19—that is, travel in the direction of the axis of rotation. With the parts in the positions indicated in Fig. 1, the blades 23 have no inclination or pitch whatever. If, however, the sleeve 7 be moved to the right, according to Fig. 1 so that the annular guide 19 is shifted to the right according to this figure, the blades 23 are tilted or given pitch in one direction; and if the sleeve 7 be shifted so that the grooved wheel 19 moves to the left according to Fig. 1, the blades are given a pitch in the opposite direction. Thus the operator, by noting the position of the sleeve 7 and moving this sleeve to the right or left, according to Fig. 1, may vary within reasonable limits, the pitch of the blades 23. Each time the sleeve 7 is moved into its middle position, as indicated in Fig. 1, the blades are brought to their neutral position indicated in Fig. 1. But if the sleeve 7 be shifted in either direction from this middle position, the blades are each tilted or given a different pitch accordingly, all of the blades being actuated in the same manner at the same time.

I do not limit myself to the precise mechanism shown, as variations may be made therefrom without departing from the spirit of my invention, the scope of my invention being commensurate with my claims. Neither do I limit myself to any particular material to be employed in making my device, nor to any special use for which the device may be employed.

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

1. A device of the character described, comprising a bracket, a stationary tubular shaft carried thereby and provided with

pairs of opposed slots near opposite ends thereof, a pin extending through one pair of said slots, a stationary shaft located within said tubular shaft and movable bodily in the direction of the length thereof, another pin carried by said last mentioned shaft and extending through the other pair of slots, a grooved wheel mounted on the first named shaft over the last named slots and receiving the second named pin therethrough, a revoluble casing on said tubular shaft and inclosing a portion of the same and said grooved wheel and second named pin, a blade carried by said revoluble casing, and adjustable angularly in relation thereto, and mechanism connected with said blade and with said grooved wheel for enabling axial adjustment of said wheels to adjust the pitch of the blade.

2. A device of the character described, comprising a bracket, a stationary tubular shaft carried thereby and provided with pairs of opposed slots near opposite ends thereof, a pin extending through one pair of said slots, a stationary shaft located within said tubular shaft and movable bodily in the direction of the length thereof, another pin carried by said last mentioned shaft and extending through the other pair of slots, a grooved wheel mounted on the first named shaft over the last named slots and receiving the second named pin therethrough, a revoluble casing on said tubular shaft and inclosing a portion of the same and said grooved wheel and second named pin, a plurality of radial blades carried by said revoluble casing, said casing being provided with bearing sleeves receiving the blades for angular adjustment therein with reference to the casing and the axis of the shafts, a removable head on the end of the casing, said casing being adapted to receive suitable lubrication, means to prevent displacement of the casing with respect to the tubular shaft, crank members connected with said blades for changing the pitch thereof, and rollers carried by said crank members and engaging said grooved wheel for the purpose of enabling said wheel to change the relative positions of said crank members by shifting the pin and second named shaft longitudinally within the tubular shaft.

RAY M. MURRAY.