

the number of people that will attend the World's Fair while it is open, what would be one of your guesses? A. 15,000,000 to 16,000,000.

(5370) J. T. S. writes: Will you please let me know of a preparation for cleaning brass? A. Oxalic acid dissolved in water and mixed to a paste with any polishing, as tripoli, rotten stone or rouge. See "Scientific American Cyclopedic of Receipts" for several pages of polishing receipts, \$5 mailed.

(5371) A. E. T.—Wind your field magnet and armature with No. 24 wire. We do not think the motor you are making will answer for clock winding, because it has dead centers and will not start. It will be better for you to make a three-pole armature, or better yet, to make a small machine like that described in SUPPLEMENT, No. 783.

(5372) W. H.—You can make a dynamo to furnish 20 volts by following the instructions given in SUPPLEMENT, No. 600, except as to the winding of the armature. You will need to wind the armature with No. 16 wire. If you desire to make a smaller dynamo for that voltage, make it two-thirds the dimensions given in the article referred to, using the same winding.

(5373) L. L. H.—The shape of the waist of the field magnet is practically immaterial; there is, however, a slight advantage in using a cylindrical field magnet, as that form permits of using the shortest length of wire for a given number of ampere turns.

(5374) B. H. C. writes: I wish you would answer W. H. C.'s question (5382), issue of August 19, more explicitly. Why are nails called penny, as three penny, four penny, etc.? A. The term penny, when used to mark the size of nails, is supposed to be a corruption of pound. Thus a 3 penny nail was such that 1,000 of them weighed 3 pounds, a 4 penny such that 1,000 weighed 4 pounds, and so on.

(5375) E. W. H.—To cure body lice use mercurial ointment.

(5376) W. H. D. asks: 1. The proper mixture to make of air and 74° gasoline to get the greatest force from explosion. A. For 1 part by weight of naphtha of 74° sp. gr. use 20 parts of air. This gives about 1 fluid ounce of naphtha for 2,000 cubic inches of air. 2. Why will a gasoline engine work stronger using gasoline than using manufactured gas? A. Gasoline for a given bulk has higher heating power than common gas. 3. What is the cost of an ordinary hydrometer? A. 25 cents upward. 4. Where can a glass boiler be procured, such as are used for showing steam currents, etc.? A. Address our advertisers dealing in scientific instruments. 5. Why is there such a great difference between the indicated and the actual horse power of gasoline engines, and what is the cost of operating these engines with gasoline at 15 cents per gallon? A. No real indicated horse power for a gas engine is used in rating; the stated figure is arbitrary, hence the difference arises. For cost of operating address the manufacturers.

TO INVENTORS.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

September 12, 1893,

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Advertising device, J. A. Gibbons	504,919
Alarm. See Railway crossing alarm.	
Alarm system, electrical, Hall & Lillard	504,930
Almond hulling and shelling machine, W. G. Read	
Amalgamating pan, M. F. Boss	504,859
Animal trap self-setting, C. C. Martin	504,811
Annunciator restoring system, L. A. Berthon	504,797
Architectural purposes, composition for, E. A. Moore	504,938
Axle lubricator for vehicle hubs, R. Parker	504,816
Bag holder, See Traveling bag.	
Baling apparatus, cotton, E. M. Ivens	504,787
Band cutter and feeder, M. T. Minogue	504,836
Band cutter and feeder, automatic, C. H. Edwards	504,715
Banjo, J. F. Luscombe	504,810
Barber's cabinet, J. B. Co.	505,030
Barber's chairs, automatic register for, J. E. Mann	
Barrel setting-up, crozing, and clinching machine, F. S. Palmiter	505,053
Bed and dressing case, combined, folding, J. Flory	504,891
Bell, bicycle, O. B. Beach	504,778
Bell rinsing device, W. J. Goings	504,721
Bench dog, C. L. Bronk	504,932
Bicycle canopy, J. S. Barnes	504,900
Bicycle chain wheels, adjusting device for, A. Featherstone	504,870
Bicycle wheel hub, Nessel & McLish	504,888
Billiard cushion, C. Schubelburg	505,007
Billiard register, W. H. Woodruff	504,557
Biscuit cutter, Grotenhuis & Slidway	504,834
Bit. See Bridge bit.	
Blanket retaining device, N. J. & E. J. Bissell	504,701
Block. See Pulley block.	
Boiler. See Tubular boiler.	
Boiler safety plug, C. E. Van Auken	504,896
Bookbinding, J. Krozer	505,049
Boot or shoe heels, machine for breasting, H. A. Webster	504,854
Root treating machine, J. Warren	504,765
Boring cylinders and turning the flanges thereof, machine for, A. & F. Pearn	504,742
Box. See Paper box.	
Box lid, packing, T. Tucker	505,012
Bricket. See Dental bracket.	
Brick kiln, reversible draught, A. L. Plasters et al.	504,998
Brick or tile machine, W. S. Hight	504,781
Bridle bit, H. Zahn	504,959
Bronzing machine, F. R. A. Franke	504,718
Broom or brush holder, W. W. Moore	504,887
Buckle, W. B. Draper	504,867
Buckle, protective, F. W. Swigart	504,834
Burner, See Flashlight burner. Gas burner.	
Bust supporter, I. M. Rew	505,003
Calculating device, J. S. Durst	504,776
Calculating machine, W. S. Burroughs	504,963
Can. See Oil can.	
Can filling machine, G. Roth	505,005
Car coupling, A. L. Brown	504,823

Car coupling, E. W. Seitz	504,759
Car coupling, S. A. Yeager et al.	504,958
Car safety attachment, Bisbing & Gerhart	504,884
Car seat, J. Lemman	504,882
Car wheel, J. Rolling	504,730
Carbon, electric arc lamp, R. McManus	504,815
Card case, J. F. Smith	504,948
Carding engine, E. & W. H. Crowther	504,908
Carding engines, feed roll weighting device for, W. P. Canning	504,707
Carpet sweeper, Newblagging & Worz	504,846
Carriage, folding baby, F. F. Plouf	504,817
Cart, road, J. B. Armstrong	504,771
Cartridge implement, T. M. Pierce	504,789
Cartridge loading machine, M. Bielefeldt	504,699
Carriage shell crimper, G. D. Hunter	505,046
Cartridge with amorphous explosive shell and charge, H. Maxim	504,736
Case. See Card case. Umbrella case.	
Cat barrier, G. S. Niles	504,936
Catheter, O. De Perzer	504,744
Centering, preparing, and countersinking bars, studs, etc., machine for, W. Webster	505,013
Chair. See Folding chair.	
Chateletine, A. B. D. Knight	504,839
Chimney rack, F. W. Keller	504,729
Chopin, See Cotton chopper.	
Chuck, P. W. Rock	505,026
Churn, J. C. Budd	504,737
Churn, R. Moon	504,737
Cigarette making machine, J. R. Williams	505,055
Cistern cover, Menefee & Etzel	504,768
Clamp. See Work holding clamp.	
Cloth stretching and calendering machine, W. P. Mathes	504,927
Clothes line, C. B. Albert	505,016
Clutch, cushioned, H. P. Ellers	505,037
Clutch or coupling, magnetic, G. A. Brown	505,025
Clutching mechanism, G. E. Withber	504,770
Cock, compression stop and waste, T. C. Dalton	505,045
Coffee pot, S. Goldbrant	
Collet bars or rods, machine for separating, Sterling & Wilson	505,071
Colter, L. S. Bailey	505,018
Comb, H. G. Guidi	504,979
Commutator brush holder, R. N. Bayles	504,901
Compound engine, Reynolds & Cheshire	505,004
Concentrator, D. W. Humphries	504,923
Corner brake, J. H. Crocker	504,710
Cotton chopper, J. D. Schofield	504,756
Cotton gin roller, W. Dearborn	504,775
Coupling. See Car coupling.	
Crane-operating mechanism, C. W. Parsons	504,987
Crate, knockdown, J. Myers	504,857
Cream pulp Billing machine, L. J. Anger	504,857
Creamery, See Butter, B. F. Arby	
Cut-out, electric, H. N. Prentice	505,033
Cutter. See Bed cutter. Biscuit cutter. Stalk cutter. Tube cutter.	
Dental bracket, A. B. Elmore	504,828
Dental engine hand piece, S. H. Brooks	
Dental mallet, J. H. Demonet	504,912
Derailing switch, W. Wharton, Jr.	505,076
Display cabinet, M. F. Dryer	504,750
Drying machine, J. K. Proctor	504,747
Dust pan, A. L. Hollander	
Display rack, M. R. Dickson	504,915
Display rack, C. Franklin	504,916
Ditching machine, Hughes & Hull	504,826
Door check and spring, G. E. Dudley	504,741
Dough mixer, T. Gaskins	504,818
Drawing board tilting device, L. P. Streeter	504,750
Dredge, hydraulic, A. W. Robinson	504,750
Drum, S. E. Cox	504,910
Drying machine, J. K. Proctor	504,747
Dust pan, A. L. Hollander	
Display rack, M. R. Dickson	504,915
Dust pan, C. Franklin	504,916
Dust pan, C. Franklin	504,917
Dust pan, C. Franklin	504,918
Dust pan, C. Franklin	504,919
Dust pan, C. Franklin	504,920
Dust pan, C. Franklin	504,921
Dust pan, C. Franklin	504,922
Dust pan, C. Franklin	504,923
Dust pan, C. Franklin	504,924
Dust pan, C. Franklin	504,925
Dust pan, C. Franklin	504,926
Dust pan, C. Franklin	504,927
Dust pan, C. Franklin	504,928
Dust pan, C. Franklin	504,929
Dust pan, C. Franklin	504,930
Dust pan, C. Franklin	504,931
Dust pan, C. Franklin	504,932
Dust pan, C. Franklin	504,933
Dust pan, C. Franklin	504,934
Dust pan, C. Franklin	504,935
Dust pan, C. Franklin	504,936
Dust pan, C. Franklin	504,937
Dust pan, C. Franklin	504,938
Dust pan, C. Franklin	504,939
Dust pan, C. Franklin	504,940
Dust pan, C. Franklin	504,941
Dust pan, C. Franklin	504,942
Dust pan, C. Franklin	504,943
Dust pan, C. Franklin	504,944
Dust pan, C. Franklin	504,945
Dust pan, C. Franklin	504,946
Dust pan, C. Franklin	504,947
Dust pan, C. Franklin	504,948
Dust pan, C. Franklin	504,949
Dust pan, C. Franklin	504,950
Dust pan, C. Franklin	504,951
Dust pan, C. Franklin	504,952
Dust pan, C. Franklin	504,953
Dust pan, C. Franklin	504,954
Dust pan, C. Franklin	504,955
Dust pan, C. Franklin	504,956
Dust pan, C. Franklin	504,957
Dust pan, C. Franklin	504,958
Dust pan, C. Franklin	504,959
Dust pan, C. Franklin	504,960
Dust pan, C. Franklin	504,961
Dust pan, C. Franklin	504,962
Dust pan, C. Franklin	504,963
Dust pan, C. Franklin	504,964
Dust pan, C. Franklin	504,965
Dust pan, C. Franklin	504,966
Dust pan, C. Franklin	504,967
Dust pan, C. Franklin	504,968
Dust pan, C. Franklin	504,969
Dust pan, C. Franklin	504,970
Dust pan, C. Franklin	504,971
Dust pan, C. Franklin	504,972
Dust pan, C. Franklin	504,973
Dust pan, C. Franklin	504,974
Dust pan, C. Franklin	504,975
Dust pan, C. Franklin	504,976
Dust pan, C. Franklin	504,977
Dust pan, C. Franklin	504,978
Dust pan, C. Franklin	504,979
Dust pan, C. Franklin	504,980
Dust pan, C. Franklin	504,981
Dust pan, C. Franklin	504,982
Dust pan, C. Franklin	504,983
Dust pan, C. Franklin	504,984
Dust pan, C. Franklin	504,985
Dust pan, C. Franklin	504,986
Dust pan, C. Franklin	504,987
Dust pan, C. Franklin	504,988
Dust pan, C. Franklin	504,989
Dust pan, C. Franklin	504,990
Dust pan, C. Franklin	504,991</