

TO CORRESPONDENTS.

R. S. H., of Ohio—Chloroform dissolves gutta percha. If you take a solution of it, and filter it beneath a bell glass to prevent evaporation, the solution will pass through the filtering medium perfectly clear, and almost colorless.

L. S. U., of Tenn.—We think that the black paper used by manifold letter writers would answer your purpose in imparting a black impression of the stamp to white paper.

J. E., of Md.—Ground limestone is not equal to quick lime for agricultural purposes, because the latter has alkaline properties. Any device which has been in public use, with the consent of the inventor, more than two years prior to the time of making application for a patent, is an abandonment of the invention, in the eye of the law, as we understand it.

G. H. S., of N. H.—We have carefully examined the sketch of your alleged improvements in water wheels, and we are of the opinion that the peculiar manner of constructing the floats possesses novelty sufficient to warrant an application for a patent: we have had a good deal of experience in water wheels, and have never before seen the same contrivance; as to its practicability, we have some doubt, but this point can only be determined by test.

L. H., of Pa.—There is nothing patentable in the mere employment of a separate engine and boiler to drive a blower, and nothing new in the application of a blower to a coal-burning locomotive. Your only chance for a patent is on some new arrangement of the boiler or engine, or some new features in their details.

T. D. H., of Ohio—We have carefully examined the sketch of your alleged improvement in rotary pumps, and we fail to discover in it novelty sufficient to justify an application for letters patent: we have had sketches of pumps of this character before, and therefore we do not think you stand any chance to procure a patent on yours. We have not a number of the paper referred to, to send you.

E. G., of N. Y.—You had better not send in the petition against the re-extension of the Woodworth Patent until Congress is organized. Get all the names you can to the petition, before that time. We hope all who feel interested in opposing this monopoly will act earnestly and vigorously in resisting it, and there will not be much fear of the result. The remonstrance in our office is rapidly filling up with good names.

R. S., of Mass.—We cannot tell you how to render glue soft without water, or other substance, that would not render it liable to shrink after it becomes dry.

S. R. W., of Ill.—We think your alleged improvement in windmills contains the subject matter of a patent, but you must bear in mind that a great deal has been done to improve the windmill, hence the chances are less encouraging.

L. D. S., of Mass.—The theory of your invention, as stated in your letter, may be perfectly correct: we are not sufficiently familiar with medical science to enable us to decide, but it would do no good to present an expert statement of its value while the application is pending. If the case should be rejected, the testimony of medical men would be valuable to you, providing the Office should take the ground that the invention is pernicious, which it ought not to do.

G. R., of Mass.—Adjustable vise jaws have been made and patented, capable of grasping substances of unequal thickness; we do not know what your plan is, for doing this, but it may be different from all others.

E. M., of Ct.—Swedish iron, undoubtedly, yields the best quality of steel, much superior to English iron, and we believe the best specimens of English cutlery are made from it.

"Publicity's" ideas are very good: we now make place in this column for all the wants that come to us, which we are not able to answer readily.

P. I., of Pa.—Crosby has succeeded in getting the patent on his mill for re-sawing boards extended from seven years from last November. You cannot, therefore, use it without liability to him.

E. G., of N. Y.—We are very much pleased with your good opinion of our articles upon the art of dyeing. They were written by one of the editors of this journal from practical experience.

N. O. J., of N. Y.—We do not think a patent could be secured for merely casting projections to the outside of stove plates, for increasing the radiating surface: it does not possess novelty of a patentable character.

G. A. B., of Min.—Your inquiries about brick making are not sufficiently specific to enable us to understand precisely what you want.

J. L. B., of Ohio—We do not think a patent can be secured on the washing fluid. In order to obtain a patent on a composition of matter, one of the ingredients must be new for the purpose, or if all are known, then they must be combined so as to produce a new result, which does not appear in this instance to be the case.

J. T. P., of Me.—The radiator referred to in your letter was for a while in use in our office, and it operated tolerably well: the water was carried off through a pipe at the bottom of the radiator: we abandoned it for the reason that we could not get sufficient heat from it to warm our offices. We do not know whether the inventor is engaged in making them now or not.

W. P. T., of N. Y.—A modern work upon millwrighting cannot be produced; such a work is no doubt needed, but no one seems willing to incur the risk of its publication.

A. G. A., of Ill.—We are not acquainted with any work that embraces matter upon monumental designs. We think there is no such work.

G. B. A., of La.—The article on wire fencing has entirely passed from our minds, and we are therefore not able to point it out to you. Examine your files of the paper carefully and you will find it.

W. W. H., of Va.—A patent could not be obtained for drawing water from great depths in the ocean, to obtain a denser brine for makingsalt.

C. S. Smith, of Portsmouth, Ohio—wishes to procure a machine for punching the eyes of axes.

C. A. C., of Mass., writes us:—"Will you please to inform me if superfluous hair can be permanently removed by being pulled out with tweezers. Or the best method of removing it."

If our correspondent is careful to pull the hairs out by the roots, the cure will probably be permanent. We recommend him to try the operation. If not successful he might find the use of sand paper a better method. The rubbing should be continued long enough to remove not only the hair, but the skin through which it grows.

G. R. P., of Phila.—At present we are not acquainted with a solution that will give the metal you mention a red appearance.

A. T., of Montreal.—We do not intend to destroy the Benzole apparatus to which you refer.

A. B., of N. Y.—Your marble sawing machine does not embrace anything new or patentable, and unless you wish to get into a sea of troublesome litigation, you had better back out of the scrape. There is no chance whatever for you to obtain a patent unless you can ante-date a great number of applications already pending in the Office.

M. S., of Ill.—We have received your letter, and will wait till you come to the city to have your explanations respecting the valve motion.

H. B., of Ind.—We could not tell you the amount of wind pressure on a body moving with one-third less the velocity of the wind, unless we knew what the velocity or the pressure of the wind was; whether driven by a fan, or merely by the motion of the atmosphere. Much ignorance exists respecting the velocity and friction of air passing through long tubes. A series of experiments by some spirited person would be a great boon to science.

J. M. H., of Ill.—You will no doubt experience a saving in fuel by heating the air before it enters the furnace of your boiler, using for this purpose a pipe running partly through the chimney and then under the ash pit: but the plan is not patentable, it has been used before. A ten inch pipe should give you sufficient air for combustion.—You ought to use a damper in the flue at the chimney throat, and if you have not a fire-bridge under the boiler erect one as soon as possible.

A. M., of N. J.—We are unable to inform you what horse power uses octagonal or hexagonal rollers. We have never noticed the shape of the rollers employed on such powers.

Money received at the SCIENTIFIC AMERICAN Office on account of Patent Office business for the week ending Saturday, Jan. 5, 1856:—

E. A., of Conn., \$25; S. & H., of N. J., \$250; J. B. E., of N. Y., \$12; H. N. DeG., of N. Y., \$30; W. H. C., of O., \$30; M. & W., of N. J., \$30; J. P. S., of Vt., \$50; H. & M. K., of Mass., \$65; W. B. K., of Mass., \$30; H. & C., of O., \$400; E. W., of N. C., \$25; J. S. T., of Conn., \$30; A. P. C., of N. Y., \$25; A. N. T., of Pa., \$35; W. & B., of Me., \$10; R. K., of Mass., \$100; D. H. T., of Mass., \$30; J. H. B., of N. J., \$100; L. & W., of O., \$16; G. & H., of N. Y., \$30; J. R., of Pa., \$30; H. O. C., of Texas, \$25; W. H., of N. Y., \$30; G. W. B., of N. Y., \$25.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Jan. 5:—

M. M., of La.; E. W., of N. C.; R. L. & A., of N. Y.; S. & C., of Wis.; G. W. B., of N. Y.; A. P. C., of N. Y.; E. A., of Conn.; L. & W., of O.; H. O. C., of Texas; H. C. S., of N. Y.

Important Items.

GOING RAPIDLY.—The back numbers of the present volume are fast being exhausted, and those who desire the numbers of Vol. 11 complete, must not wait much longer before remitting their subscriptions, else they will be disappointed.

MODELS.—We shall esteem it a great favor if inventor will always attach their names to such models as they send us. It will save us much trouble, and prevent the liability of their being mislaid.

Subscribers or exchanges who are entitled, to the paper and fail to receive it regularly are desired to inform us that any omission may be corrected. Missing numbers are furnished gratuitously where the fault rests with the publishers.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within fourteen years can obtain a copy by addressing a letter to this office stating the name of the patentee, and enclosing \$1 as fees for copying.

Literary Notices.

BLACKWOOD'S MAGAZINE.—The December number of this prince of European monthlies, completes the forty-first volume, and is as fresh, vigorous, and racy, as in its youngest years. True, Scott, Hogg, Maginn, and Wilson, its famous contributors, are no more, but it still employs the finest intellects of Great Britain, as contributors; "Zaidoo," is completed in this number; its author is believed to be Bulwer. Now is the proper time to subscribe for this magazine. Leonard Scott & Co., No. 54 Gold st., this city, are the publishers.

AMERICAN JOURNAL OF EDUCATION AND COLLEGE REVIEW.—This is a new magazine, published by N. A. Calkins, 345 Broadway, this city, and is edited by Abalom Peters, D. D., and H. Barnard, L. L. D. The number for this month—the second issue—contains a fine steel plate engraving of the late Hon. Abbott Lawrence. Some of the articles contained in it display uncommon ability, especially the one on the "Democratic Tendencies of Science," by Prof. Olmstead. This magazine will no doubt be well sustained by the Professors in colleges, teachers in schools, and by students in general.

THE KNICKERBOCKER.—Old "Knick" is unusually rich this month. The first article is on "Pleasant Memories of the Old World," by James W. Wall, and describes very minutely old "Holyrood Palace," and the terrible scenes transacted there during the reign of the beautiful Queen Mary. The other articles and poetry (nineteen in number) are capital. This magazine has an originality about it peculiar to itself; it possesses more literary individuality than any of our magazines, especially the editorial department—there is nothing like it anywhere. Published by S. Hueston, No. 318 Broadway.

THE UNITED STATES MAGAZINE, for this month, opens with an article on "Indian Corn," which is ably written and well illustrated. A very fine illustrated article on the progress of art in our country does credit to its author. This magazine now sustains a very excellent reputation. It is published by J. M. Emerson & Co., Spruce st., this city.

THE MINING MAGAZINE.—Edited and published by W. J. Tenny, 93 Broadway, this city, contains a long article on the Manufacture of Great Britain, by Wm. Truman, C. E., who has recently written a work on the subject, which has been published in London. Some of the statements of this author have been disputed in England by Prof. Noad; Mr. Truman, however, is acknowledged to be well acquainted practically with manufacturing iron. This magazine is devoted to mines, mining, and metallurgy, geology, and is ably edited, and contains a great amount of very useful information upon every subject to which it is especially devoted.

Terms of Advertising.

Table with 3 columns: Lines, Price per line, Total Price. 4 lines, each insertion, \$1; 8 " " " " \$2; 12 " " " " \$3; 16 " " " " \$4.

Advertisements exceeding 16 lines cannot be admitted, neither can engravings be inserted in the advertising columns at any price.

All advertisements must be paid for before inserting.

IMPORTANT TO INVENTORS.

THE UNDERSIGNED having had TEN years practical experience in soliciting PATENTS in this and foreign countries, beg to give notice that they continue to offer their services to all who may desire to secure Patents at home or abroad.

Over three thousand Letters Patent have been issued, whose papers were prepared at this Office, and on an average fifteen, or one-third of all the Patents issued each week, are on cases which are prepared at our Agency.

An able corps of Engineers, Examiners, Draughtsmen, and Specification writers are in constant employment, which renders us able to prepare applications on the shortest notice, while the experience of a long practice, and facilities which few others possess, we are able to give the most correct counsels to inventors in regard to the patentability of inventions placed before us for examination.

Private consultations respecting the patentability of inventions are held free of charge, with inventors, at our office, from 9 A. M., until 4 P. M. Parties residing at a distance are informed that it is generally unnecessary for them to incur the expense of attending in person, as all the steps necessary to secure a patent can be arranged by correspondence, and the progress of the improvement should be first forwarded, which we will examine and give an opinion as to patentability, without charge. Models and fees can be sent with safety from any part of the country by express. In this respect New York is more accessible than any other city in our country.

Circulars of information will be sent free of postage to any one who wishes to learn the preliminary steps towards making an application.

In addition to the advantages which the long experience and great success of our firm in obtaining patents present to inventors, they are informed that all inventions patented through our establishment, are noticed, at the proper time, in the SCIENTIFIC AMERICAN. This paper is read by not less than 100,000 persons every week, and enjoys a very wide and substantial influence.

Most of the patents obtained by Americans in foreign countries are secured through us; while it is well known that a very large proportion of all the patents applied for in the U. S., go through our agency.

MUNN & CO., American and Foreign Patent Attorneys, 127 Fulton street, New York; 32 Essex Street, London; 29 Boulevard St. Martin, Paris; No. 3 Rue Therienne, Brussels.

MACHINERY FOR MAKING FLOUR BARRELS.—A man and boy, with this machine, will do the work of ten hands. More information can be obtained by letter addressed to A. X. Chatham, Canoga, N. Y. 18 2*

BULKLEY'S PATENT DRY KILNS, by super-heated steam, will dry grain, flour, and meal, without scorching, at a cost of two cents per lb. Also dries inch lumber in 12 to 20 hours. Circulars sent free on application. H. G. BULKLEY, Kalamazoo, Mich. 13 3*

NEW INVENTIONS WANTED.—The subscriber wishes to purchase one or more new inventions in the shape of portable or stationary line. Address, with full particulars, WILLIAM BURNET, Post Office, box 4, 32 N. Y. City. 17 3*

TREMPER'S PNEUMATIC GOVERNOR for Stationary, Marine, or Locomotive Engines.—This regulator does not allow the engine to change first, and then correct it, as others do, and will save the cost in fuel in a few months. Safety Attachment—this is a perfect safeguard, as it will stop the engine instantly in case of accident. Adjustable Pulleys—will guide belts true to any angle. Regulating Valves—this is the best valve in use for the flyball governor. Rights for sale. Address JOHN TREMPER, No. 1 South Sixth street, Philadelphia. 15 5*

ROCK DRILL.—The American Rock Drill Co. invite attention to their superior machines, adapted for all kinds of rock work in quarries and mines, and especially for artesian wells. They are simple in construction, powerful and accurate in operation, and can be run by hand, steam, or horse power. An engraving and full description appeared in No. 15 of the Scientific American, April 17, 1855. Agents and Treasurers of the A. R. D. Co. 17 3m

TECHNICAL DICTIONARY.—In the English, French, and German Languages; by Messrs. POL-HAUSEN & GARDISSAL, Civil Engineers. Ready (first part) French, English, German, price \$1.31; (second part) English, French, German, price \$1.50. These volumes are designed for the general use of Engineers, Artists, Manufacturers, Foremen, Artizans, in short, of all those who, in some way or other, are concerned in Arts and Manufactures. The present work is the key through which the foreign reader may penetrate into a language which he may know but imperfectly; it is the instantaneous translator of the corresponding technical term, or its equivalent, in the three great industrial languages.—For sale at the SCIENTIFIC AMERICAN Office.

CIRCULAR SAWS.—We respectfully call the attention of manufacturers of lumber to the great improvements recently introduced in the manufacture of our Circular Saws, which are sold by the Scientific American Patent Forging Works, and are enabled to grind circular saws from six inches to six feet with the greatest accuracy and precision. The impossibility of grinding a saw without leaving it uneven in thickness has always been acknowledged by practical saw makers. This causes the saw to expand as soon as it becomes slightly heated in working. When this takes place the saw loses its stiffness, and will not cut in a direct line. We will warrant our saws to be free from these defects: they are made perfectly even in thickness, or gradually increase in thickness from the edge to the center, as may be desired. As there are no thick or thin places, the friction on the surface of the saw is uniform, consequently it will remain stiff and true, and will require less wear and less oil. The saws are made of hard lumber, and will not be liable to become untrue. This is the oldest establishment now in existence for the manufacture of circular saws in the United States, having been established in the year 1830. Orders received at our Warehouse, No. 48 Congress st., Boston. 12 3m* WELCH & GRIFFITHS.

CIRCULAR SAW MILLS (Wells' Patent) Double and Single, of various dimensions, adapted to sawing logs of all sizes to 41-2 feet diameter; admitted the most efficient, durable, and convenient machines in the country for manufacturing lumber. Orders promptly filled and mills forwarded to any part of the United States, warranted to give entire satisfaction. Address H. WELLS & CO., Florence, Hampshire Co., Mass. 10 60w*

ENGINEERING.—The undersigned is prepared to furnish specifications, estimates, plans in general or detail of steamships, steamboats, propellers, high and low pressure engines, boilers and machinery of every description, Broker in steam vessel, machinery, boilers, &c. General Agent for Ashcroft's Steam and Vacuum Gauges, Allen & Noyes' Metallic Self-adjusting Conical Packing, Faber's Water Gauge, Sewell's Salinometers, Dudgeon's Hydraulic Lifting Press, Roebling's Patent Wire Rope for hoisting and steering purposes, Machinery Oil of the most approved kind, etc. CHARLES W. COPELAND, Consulting Engineer, 64 Broadway. 43 60wtf

PORTABLE STEAM ENGINES.—S. C. HILLS, No. 12 Platt st., N. Y., offers for sale these Engines, with Boilers, Pumps, Heaters, etc., all complete, and very compact, from 2 to 10 horse power, suitable for printers, carpenters, farmers, planters, &c. A 2-1/2 horse can be seen in store, it occupies a space of 3 feet, weighs 1500 lbs., price \$240; other sizes in proportion. 3 63w

NOTICE TO PLOW MANUFACTURERS.—JOSHUA GIBBS, of Canton, O., has invented a machine for Grinding and Polishing plows. By addressing the patentee, a cut and directions for making and using will be forwarded; also the term of three months will be granted to test its utility and advantages. Cost for erecting the machine will not exceed \$15. 12 3*

OIL SAVER.—Save 75 per cent of your oil by using Devlan, Wood, & Hancock's Patent Oil Saver. For particulars and right to use in machine shops, factories, &c., and on railroads, apply to S. C. HILLS, 12 Platt st., New York. 12 10

VAIL'S CELEBRATED PORTABLE STEAM Engines and Saw Mills, Bogardus' Horsepower, Smut Machines, Saw and Grist Mill Irons and Gearing, Saw Gummets, Hatch Drills, &c. Orders for light and heavy forging and castings executed with dispatch. LOGAN & LIDGERWOOD, 13 1y* 9 Gold st., N. Y.

IMPORTANT INVENTION.—Patented August 14th, 1855, "Garratt's Metal" for Journal Boxes of all kinds. It is anti-friction, absorbs the oil, not liable to break, it can be made cheaper than either brass or Babbitt metal, and after many long and severe tests, has been found to surpass all other metals ever used for the purpose. For the purchase of either State, county, or city rights under this patent, apply to JOS. GARRATT, Senr., Madison, Indiana. 13 3m*

1855-6.—WOODWORTH'S PATENT Machines.—The subscriber is constantly manufacturing, and has now for sale the best assortment of these unrivalled machines to be found in the United States. Prices from \$85 to \$1450. Rights for sale in all the unoccupied Towns in New York and Northern Pennsylvania, JOHN GIBSON, Planing Mills, Albany, N. Y. 14 3m*

D. BARNETT, Malleable and Gray Iron Works, No. 1 Hamilton, corner McWhorter street, Newark, N. J. Orders promptly attended to. 9 10*

BREAST WATER WHEELS.—For sale, three 14 feet diameter and 3 feet wide; the other two about 12 feet diameter and 2-1/2 feet wide. Either can be made into breast or over-shot wheels at little expense. Terms moderate. Apply to E. WHITNEY, New Haven, Ct. 15 6

MACHINIST'S TOOLS.—Meriden Machine Co. have on hand at their New York Office, 15 Gold street, a great variety of Machinists' Tools, Hand and Power Punching Presses, Forcing Pumps, Machine Belting, &c., all of the best quality. Factory West Meriden, Conn. 17 13*

W. P. N. FITZGERALD, Counsellor at Law—has removed from Washington, D. C. to the city of New York, 271 Broadway, (corner of Chambers St.). As heretofore, his practice is confined to Patent Cases, which he will prosecute or defend, as counsel, before the Supreme and Circuit Courts of the United States, also before the Patent Office, or the Judges having jurisdiction of appeals therefrom. 11 1*

OIL OIL OIL.—For railroads, steamers, and for machinery and burning—Pease's Improved Machinery and Burning Oil will save fifty per cent, and will not gum. This oil possesses qualities peculiarly adapted for lubricating and burning, and found in no other oil. It is offered to the public upon the most reliable, thorough, and practical test. Our most skillful engineers and machinists pronounce it superior and cheaper than any other, and the only oil that is in all cases reliable and will not gum. The Scientific American, after several tests, pronounced it "superior to any other they have ever used for machinery." For sale only by the inventor and manufacturer, F. S. PEASE, 61 Main st., Buffalo, N. Y. 4 1*

N. B.—Reliable orders filled for any part of the United States and Europe. 4 1*

75 CENTS A YEAR.—Or 16 months for \$1. THE NEW YORK WEEKLY SUN is now sent to subscribers at the following very low rates, payable in advance.—One copy, 3 months, 25 cts.; 6 months, 50 cts.; 1 year, 75 cts.; 10 months, \$1; 3 copies, 1 year, \$2; 8 copies, \$5; 13 copies, \$8; 23 copies \$15, with engravings.—The postage within the State is only 13 cents a year—out of the State 26 cents a year. No traveling agents are employed. Specimen copies sent gratis. All letters should be post paid and directed to MOSES S. BEACH, Sun Office, N. Y. 4

THE NEW YORK DAILY SUN.—Is forwarded by the early mails to country subscribers at \$1 per annum, or \$1 per quarter, payable in advance. The postage under the present law is as follows: to any post office in the State of New York, 75 cents per year, payable quarterly in advance. Out of New York State, but within the United States, \$1.25 per year, payable quarterly in advance. MOSES S. BEACH, Publisher, Corner of Fulton and Nassau sts. 4

IMPORTANT TO ENGINEERS AND MACHINISTS.—Those wishing to obtain the genuine articles of Metallic Oil and Grease, should send their orders direct to the manufacturer, AUGUSTUS YOCKNEY, Office 67 Exchange Place, New York. No Agents employed. 1 6m*

NORCROSS ROTARY PLANING MACHINE.—The Supreme Court of the U. S., at the Term of 1853 and 1854, having decided that the patent granted to Nicholas G. Norcross, of date Feb. 12, 1850, for a Rotary Planing Machine for Planing Boards and Planks is not an infringement of the Woodworth Patent. Rights to use the N. G. Norcross' patented machine can be purchased on application to N. G. NORCROSS, 208 Broadway, New York. Office for sale of rights at 208 Broadway, New York Boston, 27 State street, and Lowell, Mass. 42 6m*

GRAIN MILLS.—EDWARD HARRISON, of New Haven, Conn., has on hand for sale, and is constantly manufacturing, a great variety of his approved Flour Milling Machinery, Elevators, complete with Mills ready for use. Orders addressed as above to the patentee, who is the exclusive manufacturer, will be supplied with the latest improvements. Out sent to applications, and all mills warranted to give satisfaction. 10 1*

POWER PLANERS.—Persons wanting Iron Planers of superior workmanship, and that always give satisfaction, are recommended to the New Haven Manufacturing Company, New Haven, Conn. 40 1*

ANDREWS & JESUP.—Commission Merchants Cotton and Woolen Machinery, Steam Engines Machinists' Tools, Belting, &c. Importers and Dealers in Manufacturers' Articles; No. 67 Pine street, N. Y. 23 1y

NEW HAVEN MFG. CO.—Machinists' Tools, Iron Planers, Engine and Hand Lathes, Drills, Bolt Cutters, Gear Cutters, Chucks, &c. on hand and for sale. These Tools are of superior quality and are for sale low for cash or approved paper. For cuts giving full description and prices, address, "New Haven Manufacturing Co." New Haven, Conn. 40 1*

HARRISON'S GRIND MILLS.—Latest Patent.—\$1000 reward offered by the patentee for their equal. A supply constantly on hand. Liberal Commissions paid to agents. For further information address New Haven Manufacturing Co., New Haven, Conn., or to S. C. HILLS, our agent, 12 Platt street, New York 13 1*

THE EUROPEAN MINING JOURNAL, RAILWAY and Commercial Gazette. A weekly newspaper, forming a complete history of the Commercial and Scientific Progress of Mines and Railways, and a carefully collated Synopsis, with numerous Illustrations, of all New Inventions and Improvements in Mechanics and Civil Engineering. Office 26 Fleet street, London. Price \$6.50 per annum. 36 1*