

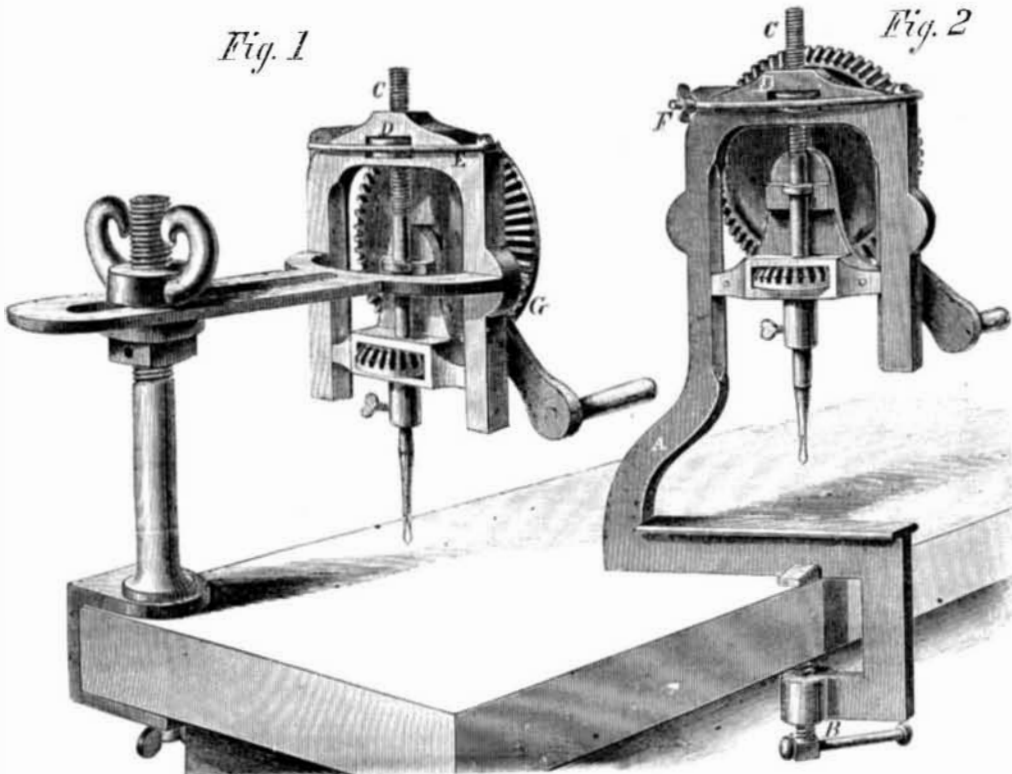
Improved Drilling Machine.

There are countless instances where a machine of the kind here shown could be used to advantage. It is a drilling machine intended to bore metals, and is simply constructed so as to render it useful to persons not familiar with mechanism, as also to enable it to be sold low.

Apart from mechanics, there are men of other callings who could use this machine with benefit. Farmers, for instance, might drill and rivet many a broken plowshare, or stove cover, or mend parts of mowing machines, and thus save the expense and loss of time in going to a machine shop. In detail, the machine consists of a cast-iron frame, A, fitted with a screw, B, which holds it to the bench. The drill spindle has

When this is done, the wedge, E, strikes the arm, F, and turns the cam block on its axis, so as to jam between the two turned faces, and thus drive the work. Thus, it will be seen, that an exceedingly efficient, simple, and elegant device for throwing power on and off is given in this pulley. There are no parts to rattle when in or out of use, or stick so that they cannot be readily worked, and the wear of the operating wedge can be compensated at any time by the set screw, G. But one belt is necessary, instead of two as heretofore, and we think much advantage would ensue from its general adoption.

It was patented on September 27, 1864, through the Scientific American Patent Agency, by L. H. Olmstead, of Newark, N. J. For further information,



GORDON'S DRILLING MACHINE.

a screw, C, on the top of which there is a nut, D. This nut is grooved to receive a wire band, E. This arrangement constitutes the feed gear, for the wire band, being screwed up by the thumb-screw, causes the nut to be held stationary, while the spindle revolved by the handle and gears, G, feeds the drill down. No further attention is required. To suit different kinds of work, the machines are made as shown in the engravings. They are strong and durable, and can be obtained by addressing the inventor, Alex. Gordon, No. 350 West Twenty-fifth street, New York City. A model can be seen at this office.

address the manufacturers, Betts, Davenport & Atwood, Stamford, Conn.

Deck Scrapers.

It now appears that our iron-clads were provided with what are called "deck scrapers." These are machines for passing up through the deck from below nine-inch percussion shells, which are then exploded and sweep everything overboard. They were

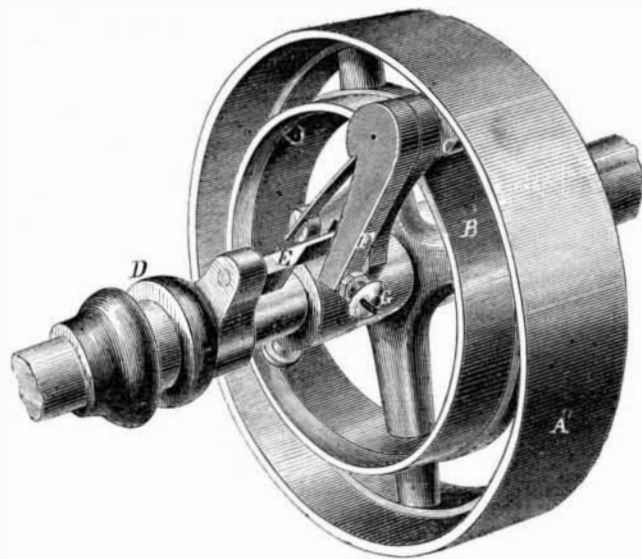
Improved Friction Pulley.

Fast and loose pulleys, the first to transmit power, and the second to carry the belt when not at work, have been used for years, but there are many objections to them which render some other device desirable. Friction pulleys, as a substitute, have been employed with advantage, and many are now in use in different parts of the country.

The one here illustrated is novel in design, and very efficient; by a simple movement of the shipper bar the pulley is made to drive the machine, or run free without imparting power when the bar is thrown back.

The details are as follows:—

The pulley, A, has a secondary wheel, B, cast on its arms, which is accurately turned; so also is the inner side of the rim of the first pulley. Between these two faces is a cam block, C, which is of a peculiar shape, constructed in such a way that it will bite or jam between the rims aforementioned, when the coupling, D, is slipped up on the shaft by the shipper.



OLMSTEAD'S FRICTION PULLEY.

tried on the Dictator with wooden men, and the force of the explosion tumbled every thing on deck into the sea, and a fragment of shell cut the chain cable in two. This is a fact for the English papers which proposed to capture our iron-clads by boarding.

TO
INVENTORS, MECHANICS, AGRICULTURALISTS,
THE ANNUAL
PROSPECTUS.
OF THE
Scientific American.

THE CHEAPEST AND BEST
MECHANICAL JOURNAL IN THE WORLD
A NEW VOLUME OF WHICH COMMENCED
JULY 1, 1865

This valuable journal has been published nineteen years, and during all that time it has been the firm and steady advocate of the interests of the Inventor, Mechanic, Manufacturer and Farmers, and the faithful chronicler of the

PROGRESS OF ART, SCIENCE AND INDUSTRY

The SCIENTIFIC AMERICAN is the largest, the only reliable and most widely-circulated journal of the kind now published in the United States. It has witnessed the beginning and growth of nearly all the great inventions and discoveries of the day, most of which have been illustrated and described in its columns. It also contains a WEEKLY OFFICIAL LIST OF ALL THE PATENT CLAIMS, a feature of great value to all Inventors and Patentees. In the

MECHANICAL DEPARTMENT

a full account of all improvements in machinery will be given. Also, practical articles upon the various Tools used in Workshops and Manufactories.

HOUSEHOLD AND FARM IMPLEMENTS;

this latter department being very full and of great value to Farmers and Gardeners; articles embracing every department of Popular Science, which everybody can understand.

WOOLEN, COTTON AND OTHER MANUFACTURING INTERESTS will have special attention. Also, Fire-arms, War Implements, Ordnance, War Vessels, Railway Machinery, Mechanics' Tools, Electric, Chemical and Mathematical Apparatus, Wood and Lumber machines, Hydraulics, Pumps, Water Wheels, etc.

STEAM AND MECHANICAL ENGINEERING

will continue to receive careful attention, and all experiments and practical results will be fully recorded.

PATENT LAW DECISIONS AND DISCUSSIONS

will, as heretofore, form a prominent feature. Owing to the very large experience of the publishers, Messrs. MUNN & CO., as SOLICITORS OF PATENTS, this department of the paper will possess great interest to PATENTEEs AND INVENTORS.

The Publishers feel warranted in saying that no other journal now published contains an equal amount of useful information while it is their aim to present all subjects in the most popular and attractive manner.

The SCIENTIFIC AMERICAN is published once a week, in convenient form for binding, and each number contains sixteen pages of useful reading matter, illustrated with

NUMEROUS SPLENDID ENGRAVINGS

of all the latest and best inventions of the day. This feature of the journal is worthy of special notice. Every number contains from five to ten original engravings of mechanical inventions, relating to every department of the arts. These engravings are executed by artists specially employed on the paper, and are universally acknowledged to be superior to anything of the kind produced in this country.

TERMS OF SUBSCRIPTION.

Per annum.....\$3 00
Six months..... 1 50
Four months..... 1 00

To clubs of ten or more the subscription price is \$2 50 per annum; This year's number contains several hundred superb engravings, also, reliable practical recipes, useful in every shop and household. Two volumes each year, 416 pages—total, 832 pages. SPECIMEN COPIES SENT FREE. Address,

MUNN & CO., Publishers,

No. 37 Park Row, New York City

PATENT AGENCY OFFICE.

MESSRS. MUNN & CO. have been engaged in soliciting American and Foreign Patents for the past eighteen years. Inventors who wish to consult with them about the novelty of their inventions are invited to send forward a sketch and description. If they wish to get their applications into Munn & Co.'s hands for prosecution they will please observe the following rules:—

Make a substantial model, not over one foot in size. When finished, put your name upon it, then pack it carefully in a box, upon which mark our address; prepay charges, and forward it by express. Send full description of your invention, either in box with model, or by mail; and at the same time forward \$16, first patent fee and stamp taxes. As soon as practicable after the model and funds reach us, we proceed to prepare the drawings, petition, oath and specification, and forward the latter for signature and oath.

Read the following testimonial from the Hon. Joseph Holt, formerly Commissioner of Patents, afterwards Secretary of War, and now Judge Advocate General of the Army of the United States:—

MESSRS. MUNN & CO.:—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents, while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I doubt not justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements.

Very respectfully, your obedient servant,

J. HOLT.

For further particulars see advertisement inside, or send for Pamphlet of Instruction. Address
MUNN & CO.,
No. 37 Park Row, New York City.