

NEW DIAMOND TOOL MILLSTONE DRESSING MACHINE.

In the annexed engravings are represented side and end views of a new machine for dressing millstones devised by M. George Roger. We extract the illustrations from the *Bulletin* of the French Society for Encouraging the National Industry, under the auspices of which association the machine has been tested.

A is a face plate, to which the stone, B, is secured by the four clamps, a. C is the bed, resting upon a masonry foundation. D is the rotary tool, carrying eight diamonds and revolving 3,500 turns per minute. It is mounted on a carriage, E, which travels across the face of the stone on slides, G, on the support, F. The movement of translation of the carriage is effected by the screw, H, the rate of motion of

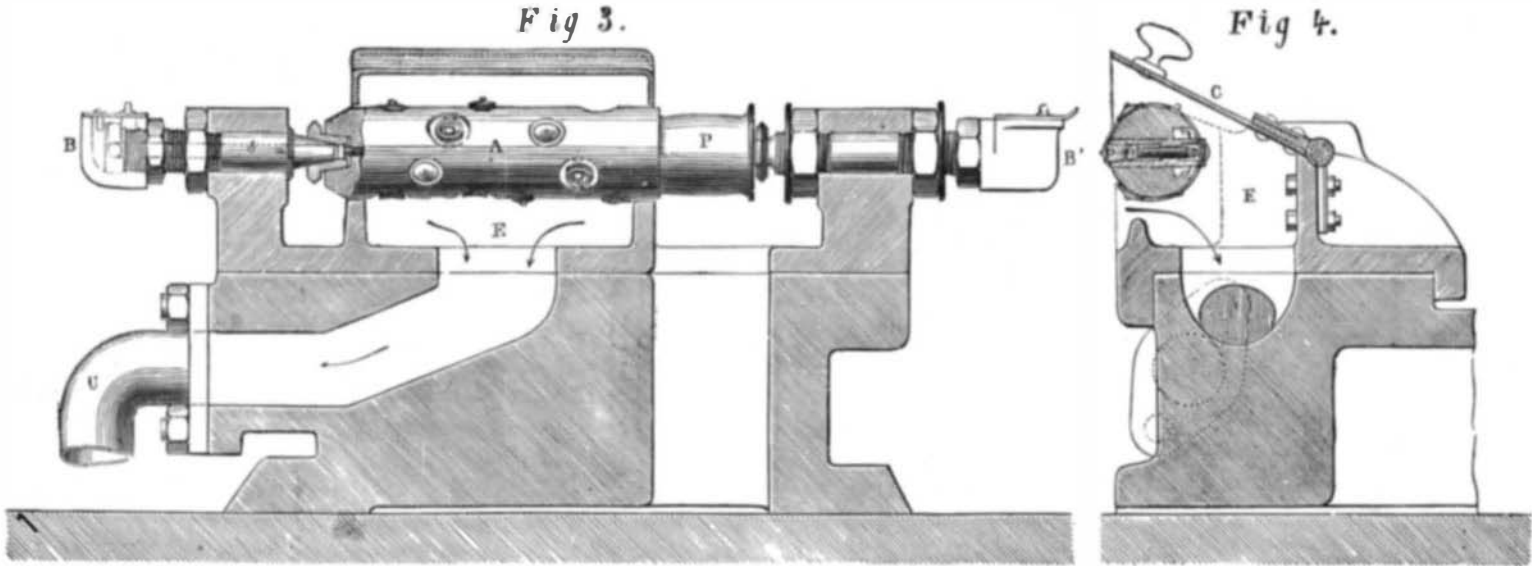
The position of the wheel, T, with relation to the disk, V, is regulated by means of the lever, S, operated by cords, s, which are attached to the ends of the tool carriage. A ventilator, V, operated by the special gearing, V', removes the dust produced through the tubes, v. The air from the blower is led into a water reservoir, X, and thence, after depositing its dust, escapes by the pipe, v''. The traveling tackle, Z, serves to adjust the stone in the machine.

The diamond tool is separately represented in Figs. 3 and 4. A is the tool, P the driving pulley. Eight diamonds are mounted on the surface of the cylinder in sleeves, and in such a way that they may be caused to project more or less by means of a regulating screw. B B' are lubricating cups, and U is the conduit whence dust is drawn by the

Mr. Samuel B. Seymour, of Mount Morris, N. Y., has devised a ladder which is made in two or more sections, so put together that either a long or a short ladder can be produced at will.

Mr. George Cornwall, of Garden City, N. Y., has patented an improved wheel tire. Around the usual iron tire is passed a rubber tire, and around this again is an iron tire made in sections, so that each section may yield or move inward as the weight comes upon it, so as to prevent noise, jarring, and wear. They are secured in place by bolts which work in rubber blocks.

An ingenious Spark Arrester for locomotive smoke stack or ordinary draft flues has been patented by M. Charles Mattoni, Jr., of Belmont, N. Y. It is so constructed that when



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which is proportioned to that of the stone's revolution. The diamond tool is actuated from the pulley, I, by the belt, I'. K and K', respectively, are fixed and loose pulleys imparting motion to the drum by means of a belt passing over the pulley, L, of the main shaft, M. A lever, P, acting on pinions, P', and P'', which engage in racks, Q and Q', enables the whole tool-carrying apparatus to be moved toward or from the stone, as desired. N is a shaft placed against a wall, which serves to set the lathe mechanism in motion, as described hereafter. On this shaft is a pulley, T, which transmits motion by friction to the disk, U, mounted on a shaft, which is belted to the lathe arbor below. A lever, U', having a counterweight, U'', always gives the necessary pressure to cause the contact of disk, U, and pulley, T. This mode of transmission by friction pulley and disk imparts to the lathe arbor a variable velocity according as the tool operates upon the stone at a portion nearer to or further from the center; so that in this way, whatever part of the stone is presented to the tool, the velocity is nearly constant.

ventilator from the chamber, E, as shown by the arrows. Access is had to the tool by lifting the cover, C.

New Inventions.

Mr. Asa T. Martin improves upon an Umbrella Holder previously patented by him November 6, 1877. The device embodies a swiveled clamp for holding the umbrella handle adjustably, and means whereby an ordinary umbrella may be attached to a vehicle.

A Grain Car, embodying a new and strong construction, has been patented by Mr. James Anderson, Jr., of Anderson, Ohio. There is a novel arrangement of supporting trusses, besides devices which greatly facilitate the operations of loading and discharging.

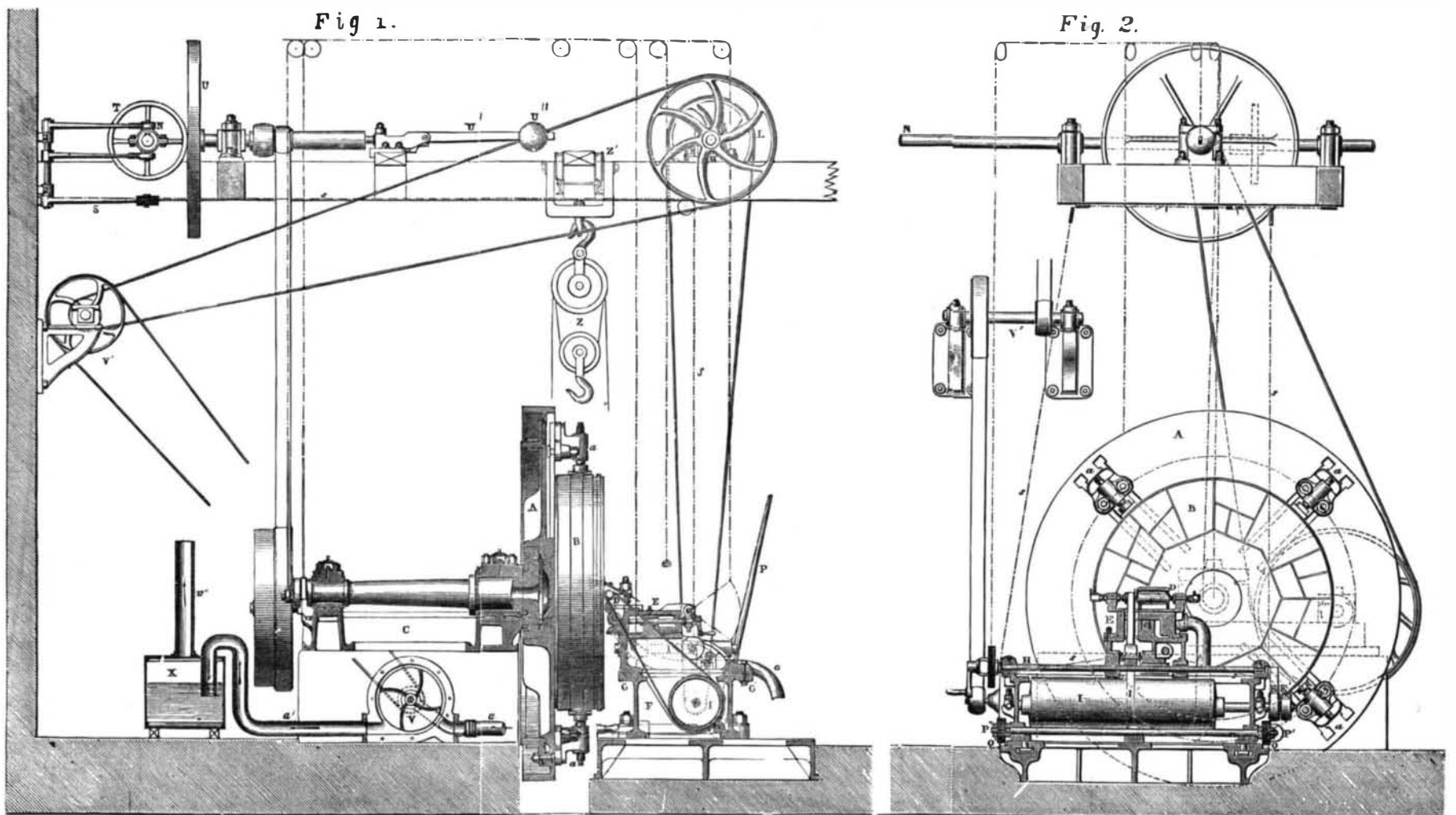
A new Washing Machine, patented by Mr. Jacob H. Jeffrey, of Orland, Ind. A receptacle is attached to the lower end of a rod, which last is moved up and down by a lever. The clothes are thus forced into the receptacle wherein air and water are forced through them, causing them to be rapidly and thoroughly washed.

the locomotive is in motion a vacuum is formed beneath the plate increasing the draft, and the smoke and cinders are carried back in the cylinder and thence through pipes to the end of the train.

A simple Adjustable Supporter for sustaining Chins of Deceased Persons has been patented by Mr. Thomas Boylston, of New York city. Its base rests upon the breast bone, and it may be shortened or lengthened at will.

A Shoe Fastener, patented by Mr. Charles L. Morehouse, of Cleveland, Ohio, consists of a base, from the ends of which a hinge stud and catch stud project through the leather. A link is attached to the hinge stud, and being turned down upon the catch stud, is held in place by the head.

In a Roof invented by S. H. Reed, of Greensburg, Penn., a gutter is formed by making a fold in a sheet of metal, corrugated longitudinally, and which projects at right angles. The gutter is connected with the lower edges of the sheets forming the roof by means of a seam. It is easily constructed.



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