

NEW PROPELLING APPARATUS.

The two views given in the engraving represent an ingenious and convenient arrangement of machinery for driving a boat by foot power. The hull of the boat is of the usual construction, having a long and tapering propeller screw, whose shaft extends forward and receives its motion from a transverse shaft placed amidships and having foot cranks arranged diametrically opposite. In front of the shaft there is a frame which supports both the steering apparatus and the seat of the operator.

The propeller shaft is made in sections so that it may be lengthened or shortened; and the propelling and steering machinery is fixed to a single frame that may be moved backward or forward, as the loading of the boat may require.

The tiller ropes extend along the gunwale through suitable guides and are attached to the tiller. The rudder is partly supported by the screw shaft.

This invention was recently patented by Mr. A. E. Tangen, of Bismarck, Dakota Ter.

Alum not Allowed in English Bread.

George Allen, baker, of Walsall, was summoned at the instance of Mr. C. W. Stephens, sanitary inspector, for selling an article of food not compounded of the ingredients demanded, and also for selling bread containing alum, so as to be injurious to health. The inspector stated that he purchased a two-lb. loaf at the shop of defendant, and forwarded it to Mr. E. W. T. Jones, the borough analyst, whose certificate of analysis he produced. The certificate showed that the loaf was adulterated with alum in the proportion of 36 grains to the four-lb. loaf, and that such adulteration would tend to render the bread indigestible. Dr. J. Maclachlan, medical officer of health, gave it as his opinion that the quantity of alum stated would be likely to make bread injurious to health. Addressing the bench for the defense, Mr. Nanson said he did not dispute that there was alum in the loaf, but he urged that none was put in by the defendant or at his establishment, and that the flour was used just as it came from the miller. The bench, after hearing the defendant, considered the case proved, and imposed a fine of £5 and costs on the first summons, the other being withdrawn. The fine and costs amounted to £7 14s.

NEW MILLING ATTACHMENT FOR LATHES.

The invention illustrated herewith is intended to supply the wants of machinists who are unable or unwilling to purchase a milling machine and yet appreciate the great saving of labor, files, etc., effected even by the occasional use of such a machine.

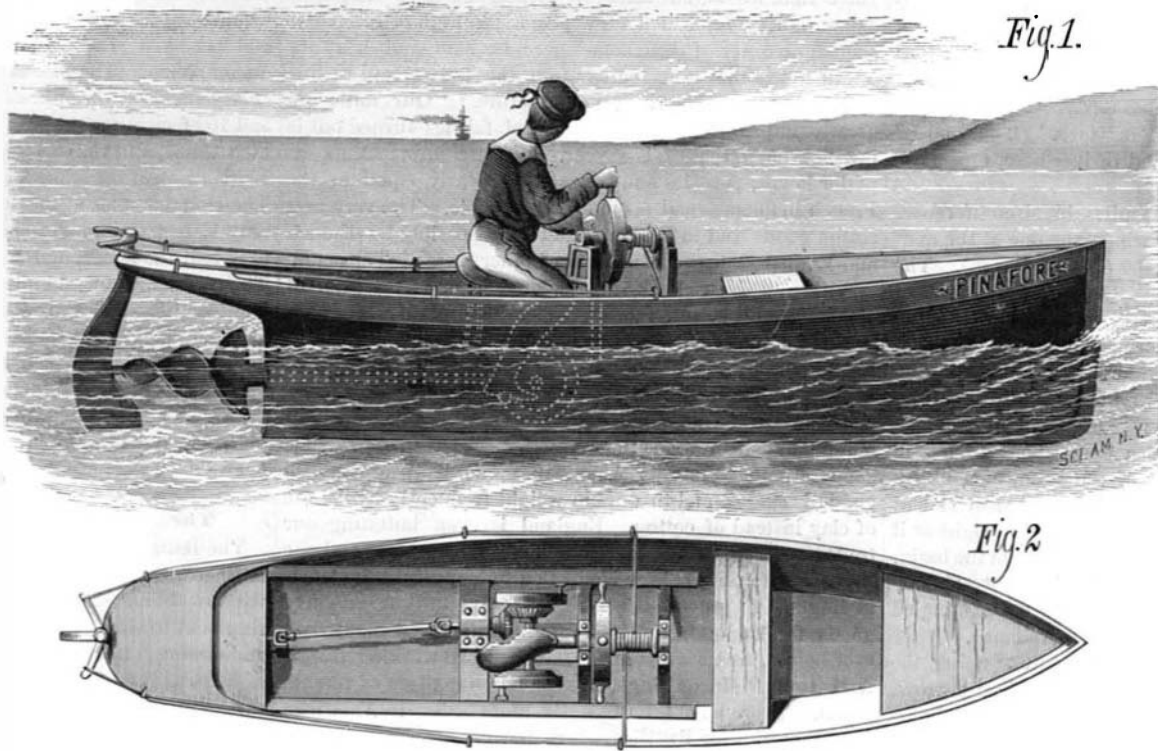
This device can be easily applied to any lathe, can be removed or put in position in a fraction of a minute, and will, it is claimed, work with the smoothness and solidity of the best milling machine. It consists, essentially, of a rectangular frame swinging between the lathe centers and carrying a cutter arbor. The position of this cutter frame is adjusted and its stability secured by means of the U shaped clamping plate, which carries a tangent screw, and is itself clamped to the lathe bed in front of the head stock.

The cutter arbor runs between steel center points, the right hand point being adjustable and secured by a jam nut. It is driven by a gear which is secured to a small face plate screwed upon the lathe mandrel. The front side of this gear carries the running center of the lathe, which bears against the projection of the cutter frame. The position of the cutter frame, and consequently the height of the cutter, is adjusted by the tangent screw engaging the edge of the annular worm wheel plate which forms a part of the cutter frame. This

plate, and with it the cutter frame, may be held in any position by the clamping nut which appears in front, and also by a similar nut on the opposite side, which does not show in the engraving. The cutter frame is therefore rigidly secured to the lathe bed at three points in a horizontal plane, and as the running center of the lathe occupies a central position there is no leverage or undue strain upon it.

The friction being upon hardened steel centers the machine runs easily at high speeds, and the solidity of the frame allows the taking of a heavy and smooth cut.

By relaxing a nut beneath the lathe bed and sliding back

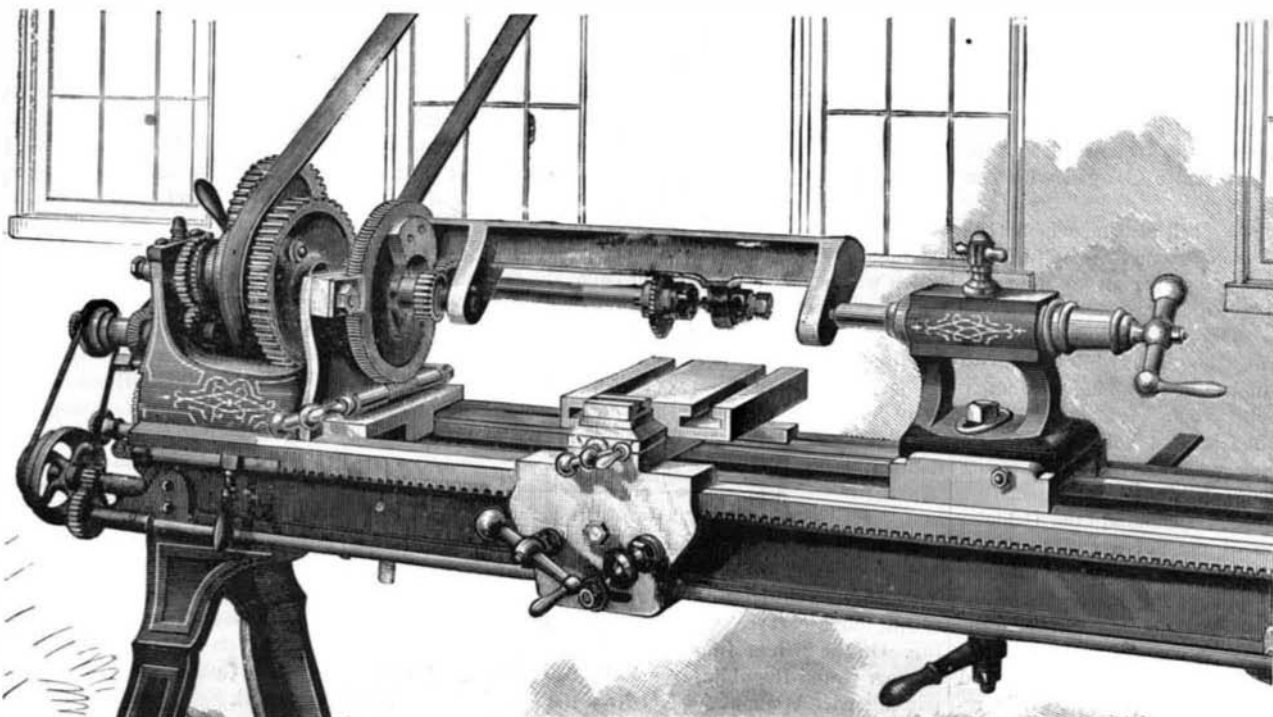
**TANGEN'S PROPELLING APPARATUS.**

the tail stock, both clamp plate and cutter frame are released and may be lifted off together.

The bedplate runs on the cross slide of the lathe carriage, and is linked to the tool head so as to traverse with it by means of the cross feed screw. Its longitudinal motion is of course that of the lathe carriage. This bedplate is made in sizes to suit different carriages, and is fitted with centers for fluting taps, facing nuts, etc., and is provided with a vise; it will carry any planer or milling machine vise or chuck of suitable size. It need not be removed when the lathe is performing its ordinary work as it is not in the way, serves to protect the slide from dirt and chips, and is often of use in boring cylinders and similar work. An ordinary parallel vise, mounted on a bar or shank fitting in the tool post, may be used to hold work, thus dispensing with the bedplate altogether. This arrangement, though less desirable, will do good service, and may in some cases be preferred.

Further information may be obtained from Mr. William Main, Piermont, Rockland county, N. Y.

Dr. Reimann advises those engaged in cotton dyeing to discontinue the use of tartar emetic. It does not fix the aniline colors themselves, but merely fastens the tannin, and as antimony can be dispensed with there is no reason why health should be endangered.

**MAIN'S MILLING ATTACHMENT FOR LATHES.****Antiquities from Chiriqui.**

At a meeting of the New York Academy of Sciences, June 2, representative specimens were exhibited of a large collection of flint implements, golden frogs, potteries, and the like, obtained by Mr. McNeill, from ancient graves in Central America. These objects are for the most part now in the possession of Mr. J. S. Lamson, of this city, who described, from Mr. McNeill's notes, the manner of their occurrence in the graves about the slopes of Chiriqui mountain.

The graves cover many acres (even many square miles) at the base of Chiriqui, near the coast, lying for the most part beneath many feet of alluvial deposit. No external sign

marks the place of one of these tombs, but the natives find them readily by sounding the soft earth with long iron rods, which vibrate when they come in contact with flat stones with which they are covered. Some of them are oblong in shape, like modern graves, but by far the greater part are nearly circular. The walls are all of sea-worn stones, of a kind not at present existing in the neighborhood, and the flat slabs that cover them have been brought obviously from a great distance, as no such material exists in the vicinity. It has not been discovered that these tombs are arranged with any regard to special order, but there is some sort of evidence that the larger ones have been reopened for the reception of bodies from time to time, down to a date of comparative recency.

The implements exhumed consist, in the first instance, of knives and rude weapons of stone, together with polishing stones, obviously used to smooth the surface of the

pottery. The latter shows a great many interesting forms, most common of which is the jar, very pointed at the bottom, with an extremely narrow neck, and not very inclining lips. They vary in proportions from jars having a capacity of less than a pint to those capable of holding two quarts. The ruder specimens rest upon tripods, while the more highly ornamented have no legs and must have been somewhat inconvenient vessels to handle. The coarser pottery is not decorated in colors. The top is bordered with an ornamented design cut in or incised so as to resemble the modern stamp, and there are some attempts at figure work, the principal animals being the frog, the owl's face, according to some, cougar's according to other critics, and the monkey; although Prof. Putnam, of the Peabody Museum, thinks that these so-called monkeys are rude representations of the human form.

The collection has also some very curious representations of birds, which are ornamented with red stripes upon a black ground. The latter are hollow within and perforated at the tail, at the bill, and beneath the wings, so as to be used as whistles to imitate the notes of birds, and to produce different musical notes by closing one or another of the apertures with the fingers. Their use, unless to attract birds by imitating their notes, is doubtful. The legs of the tripods are heavy, pod-shaped, and hollow, containing within several balls of pottery and furnished with a slit like old-fashioned sleigh bells. Their sound when shaken is similar to that of

a rattle-box; but it is scarcely credible that they were used for that purpose, although there are several pottery rattle-boxes in the collection. Professor Putnam, who had given the collection a careful examination, entered upon a very elaborate comparison of these remains with the Mexican, Peruvian, and those of the mound-builders, who, it appears, had a similar trick of hollowing out the legs of their tripods and furnishing them with movable balls. According to Professor Putnam, these remains are found as far south as Bogota, and while they have some affinity for the Mexican and Peruvian potteries, they are both less graceful in design and