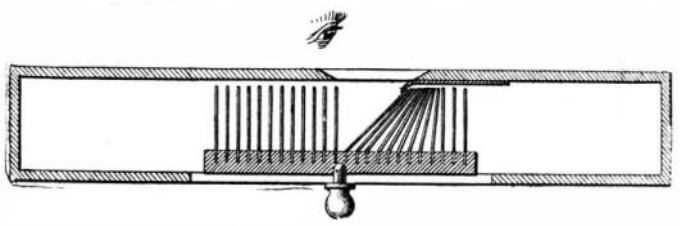
RECENT INVENTIONS.

We represent herewith some recently patented inventions which seem to have considerable interest.

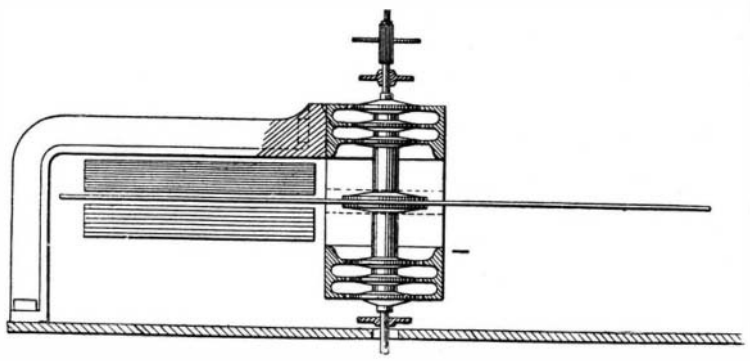
MUTOSCOPE.—One of the simplest forms of mutoscope is shown in the engraving. It is the invention of H. Casler, of Canastota, New York.

It is designed to show a series of pictures in rapid succession, so as to produce the motions of living objects. The mutoscope consists of a receptacle having an opening in its face and a sliding rack mounted therein; a series of picture cards carried by the rack, a handle for reciprocating the rack, and a finger for momentarily retarding the upper end of the passing card.



H. CASLER—MUTOSCOPE.

SUPPORTER FOR ROTATING SHAFTS.—A novel device for supporting rotating shafts has been patented by W. Stanley and F. Darlington, of Pittsfield, Mass.

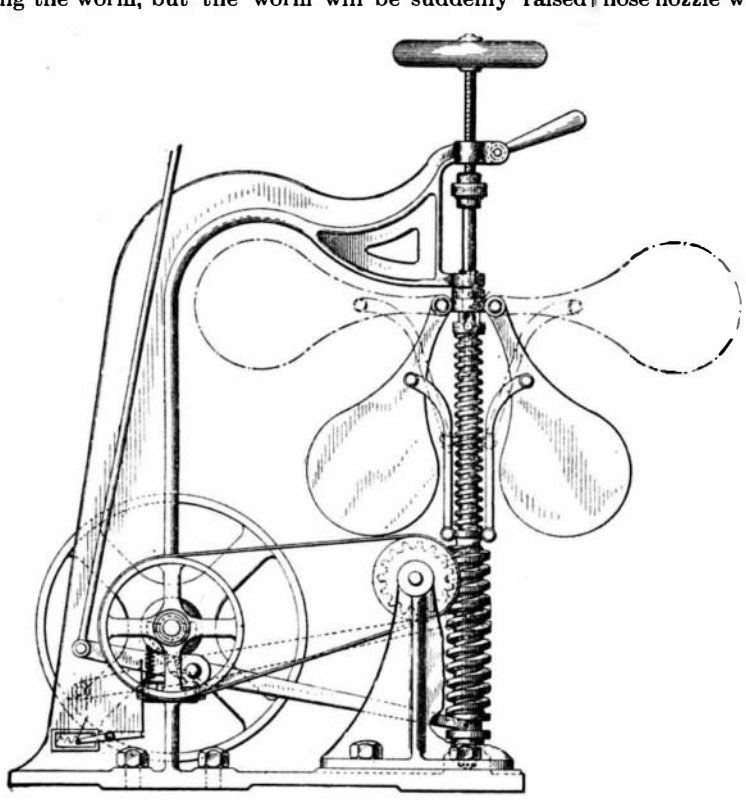


W. STANLEY & F. DARLINGTON—MEANS FOR SUPPORTING ROTATING SHAFTS.

Although this device is intended chiefly for delicate instruments, such as electric meters, it may be applied to other machinery. The vertical shaft is provided with two series of collars, which are placed within magnetic pole pieces having interior rings or flanges closely surrounding but not touching the collars on the shaft. The magnets which are joined to the pole pieces are arranged to produce consequent poles. The shaft is guided by small journals at the upper and lower ends. In consequence of this construction the shaft is supported without friction or wear.

NON-CENTRIFUGAL GOVERNOR AND SPEED INDICATOR.—In the governor shown, the speed of the engine to be governed is transmitted through a gear wheel, revolving coincident with the motion of the engine, to a movable worm gear, the position of which is controlled by the tension of a spring and the resistance of revolving fans. The result of this combination is that a constant increased or decreased motion will not be transmitted instantly or necessarily at all to the fans, for the action of the gear wheel upon the worms is twofold. It may drive the worm at a speed depending upon the relation of the pitch of the worm to the teeth of the gear, or, if motion be suddenly increased, the teeth will not follow the spiral of the worm when driving the worm, but the worm will be suddenly raised one or more teeth, owing to the sudden increase in the speed of the driving mechanism. The raising of the worm does not, however, revolve it, but compresses the governing spring. It is this function which is utilized in determining the speed of the governed engine. Ultimately the increased speed of the engine, if not arrested by the governing mechanism, would communicate itself to the revolving fan. This would occur when the spring had resumed its normal tension; but this tendency of increase in the revolution under these conditions is counteracted in the fan itself, which is constructed so as to oppose an increasing resistance to any tendency to drive it faster or a decreased resistance to any tendency to drive it slowly.

When the worm revolves faster than a predetermined rate, the increased speed of the engine will be taken up first by the raising of the worm and then by the increased resistance to rotation of the fans. The worm being connected to the throttle valve of the engine, the first result of an increased speed of the governor will be a coincident movement of the devices for controlling the flow of steam. The contrary result would be accomplished provided the fan were driven at a less velocity.



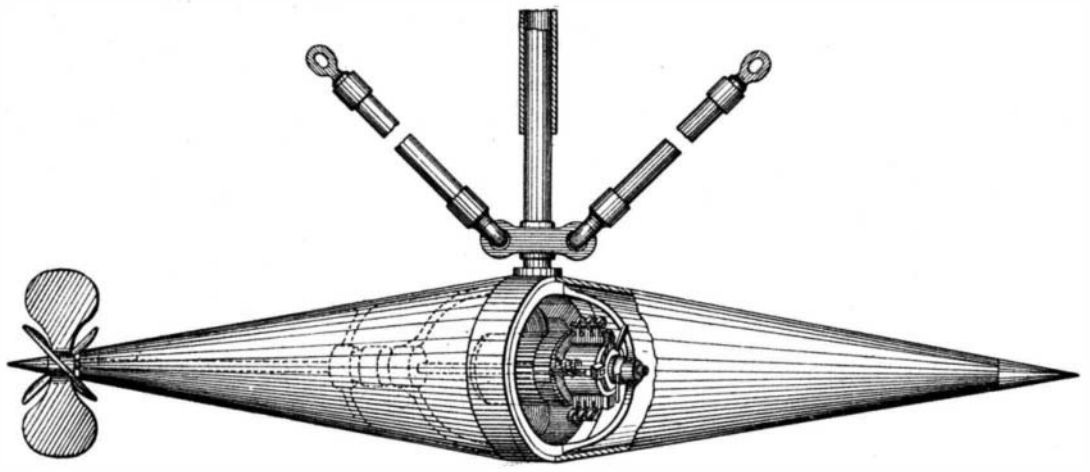
J. F. RADERS—NON-CENTRIFUGAL GOVERNOR AND SPEED INDICATOR.

J. F. Raders, of Flushing, N. Y., is the inventor of this governor.

AUXILIARY PROPELLER.—The engraving shows a simple and apparently efficient device for propelling and steering a vessel in case the ordinary machinery becomes disabled or in case a sailing vessel requires auxiliary or alternative propelling or steering machinery.

The motor case has conical ends and is provided with a motor, either electric, steam or air, and a screw driven by the motor. The motor case has a hollow arm which prevents it from turning, and which contains the electric wires or the steam or air pipes connected with the motor. The braces serve to hold the case in the position of use.

It can readily be imagined that a device of this kind might prove a very useful adjunct to a steamship, large sailing vessel, or even a war vessel.



R. M. FRYER—AUXILIARY PROPELLING DEVICE.

R. M. Fryer, of Washington, D. C., is the inventor of this propeller.

HOSE NOZZLE.—The engraving shows an improved hose nozzle which may be made to throw a solid, round stream or a divergent, fan-shaped stream at will.

The nozzle body is a single casting, with a circular delivery and a flattened delivery, both extending in practically the same direction. A valve plug is fitted to the nozzle body, at the junction of the two deliveries, so that, by turning the plug in one direction or the other, the water may be directed so as to pass through the cylindrical or circular nozzle.

This device is the invention of J. Askins, of Redfield, N. J.

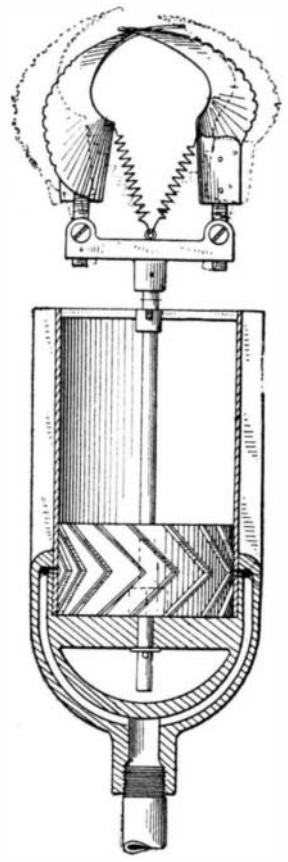
ROTARY FLUE CLEANER.—L. J. Jones, of East Norwalk, Conn., is the inventor of a rotary flue cleaner, designed to loosen soot, ashes and scale, and at the same time force them out of the flue.

The cleaner consists of a case provided with steam ports, a turbine wheel placed in the casing, mounted on a shaft and capable of revolving with great velocity, and a pair of scrapers pivoted to a cross arm on the shaft and arranged to be thrown outward into contact with the flue by centrifugal force. A tubular handle, attached to the casing, serves as a conduit for steam supplied to the turbine.

PERSONS in New York may now talk with Council Bluffs, connections just having been completed.

A Statue of Tubal Cain.

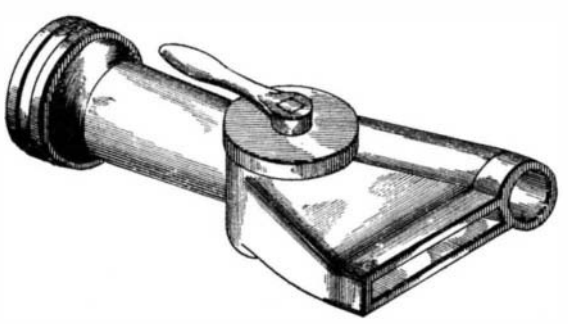
The iron and steel manufacturers of eastern Pennsylvania have decided to erect a statue to Tubal Cain, the original worker in metals, as their patron. They propose to honor his memory by erecting a statue on the Ohio River, at the junction of the Allegheny and Monongahela Rivers. The project has been taken up by the Engineers' Society of Western Pennsylvania and the Pittsburg Foundrymen's Association. It is proposed to build the pedestal of the statue of iron and steel, at a cost of about $200,000; upon this will rest a mammoth anvil, while a colossal bronze statue of Tubal Cain will stand in the attitude of swinging an enormous sledge hammer. The position of the statue will be such that nearly every visitor by river or rail will see it from a distance.



L. J. JONES—ROTARY FLUE CLEANER.

Nansen's Outfit Here.

The Thingvalla Line steamship Amerika, which recently arrived in New York from Christiania, Norway, brought the first consignment of relics from the recent Nansen polar expedition. The famous explorer will sail at a later date. A number of the larger articles used on the famous voyage of the Fram are now on exhibition at the Stockholm Exposition and will be forwarded in a short time. The collection which has already arrived in this country consists of various utensils fashioned for the most part by Nansen and Johannsen when they left the Fram and made a dash for the pole. Each article mutely tells the story of hardship, suffering and daring.



J. ASKINS—HOSE NOZZLE.