

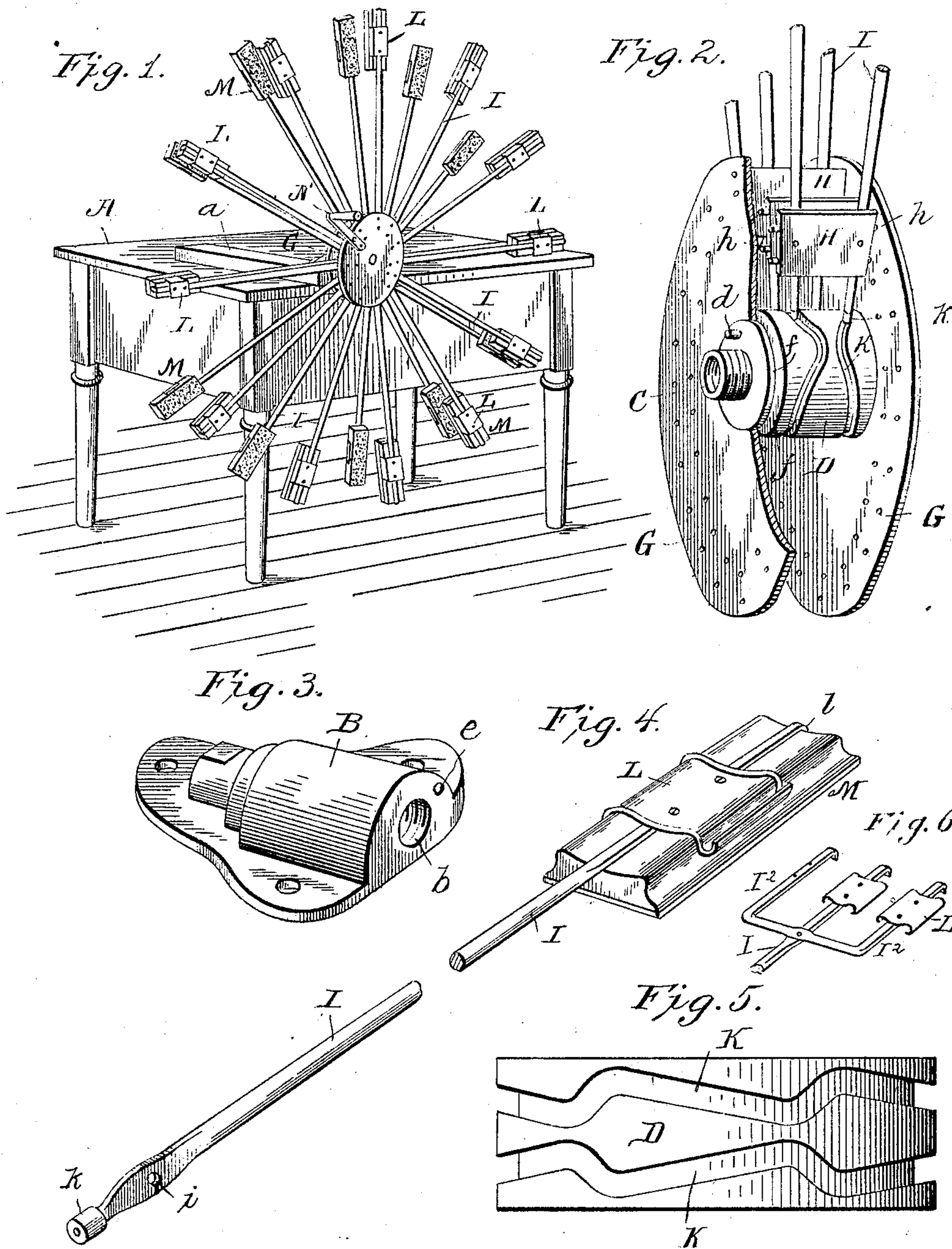
No. 799,340.

PATENTED SEPT. 12, 1905.

A. ILSTRUP & J. HEDLUND.

ERASER CLEANER.

APPLICATION FILED MAY 22, 1905.



Witnesses.

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UNITED STATES PATENT OFFICE.

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ERASER-CLEANER.

No. 799,340.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed May 22, 1905. Serial No. 261,622.

To all whom it may concern:

Be it known that we, ARTHUR ILSTRUP and JOHN HEDLUND, citizens of the United States, residing at St. Cloud, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Eraser-Cleaners, of which the following is a specification.

This invention relates to blackboard-eraser cleaners; and the objects are to furnish an apparatus with which a plurality of erasers can be simultaneously cleaned and held at a convenient distance from the operator to avoid a large proportion of the escaping dust. We attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the apparatus, showing twelve pairs of beaters thereon. Fig. 2 is a perspective view of a portion of the shaft and also the central stationary cam and hub and the disks carrying the bearing-plates for the pivoted arms of the beaters, one of the disks being broken away to show the internal construction. Fig. 3 is a perspective view of the bearing for the central shaft. Fig. 4 is a perspective view of one of the beater-arms, carrying one of the erasers. Fig. 5 is a diagram view of the cam opened in plan. Fig. 6 is a modification of a beater-arm.

In said drawings, A represents a table-like support, upon the top of which is secured a block of wood *a*, one end of which projects a suitable distance over the edge of the table to give room for the arms of each pair of the beaters to spread themselves apart from each other at the proper time under the direction of the stationary cam. Upon the projecting end of the block *a* is secured the bearing B. (Shown clearly in Fig. 3.) Said bearing has a screw-tapped hole *b* to receive the screw-threaded end of the shaft C. Said shaft is secured to the double-grooved cam D or is preferably made integral therewith and has its projecting end screwed into the bearing B. To prevent the shaft from being accidentally unscrewed if rotated in the wrong direction toward the left side, the cam D is additionally anchored to the bearing B by means of a rod *d* of small diameter made to pass through the cam after its shaft is screwed to the bearing B, the end of the rod *d* being received in

a perforation *e*, made in the end of said bearing.

The periphery of the cam D is of reduced diameter at the ends, as shown at *f* in Fig. 2, to form bearings for the disks G, constituting the hub of the wheel, to revolve upon. Said disks are united together by pairs of plates H, constituting the bearings and side guards of the beater-arms I. Each plate has projecting from its ends two lugs *h*, which are received in suitably-arranged perforations in the disks and secured thereto by any suitable means. To each pair of plates H are pivoted a pair of beater-arms I by means of small bolts passing therethrough and through the perforations *i*, which are made in the beater-arms at a short distance from their inner ends. Said inner ends are provided with rollers *k* to facilitate their traveling in the grooves K of the cam D. Said grooves are so formed and arranged as to cause each pair of arms to be clapped together twice while making a revolution around the cam D. Each beater-arm has secured thereto a short distance from its outer end a sheet-metal saddle L, the sides of which are adapted to clasp the concaved sides of the erasers M, and the outer end of each beater-arm is bent in the form of a hook *l* to engage the end of the eraser and prevent it being thrown away by the centrifugal force caused by the wheel. Said wheel is provided with a handle N, secured to the outer disk thereof. The said wheel may be inclosed in a sheet-metal casing, which may be removable, if desired, or have a portion of its top periphery provided with doors.

In the modification shown on a small scale in Fig. 6 the beater-arm I is shown, not alone, but carrying near its end and on each side thereof shorter arms *I*², each adapted to carry a spring-metal saddle L to clamp a blackboard-eraser, and thereby increase the capacity of the machine.

Having now fully described our invention, we claim—

1. An eraser-cleaner consisting of a wheel having for a hub two disks united together, a series of plates arranged in pairs between said disks, a series of beater-arms pivoted to said plates and a saddle for an eraser carried by each beater-arm adjacent to its outer end, with a stationary double-grooved cam receiving the inner end of each beater-arm, a bear-

ing carrying the grooved cam, and a support for said bearing, substantially as described.

2. In an eraser-cleaner the combination of a wheel having a hub consisting of two disks,
5 a series of bearings secured to the inner sides of said disks, a series of beater-arms pivoted to said bearings, a stationary double-grooved cam receiving the inner end of each beater-arm, a bearing carrying the grooved cam, and

a support for said bearing of the cam, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ARTHUR ILSTRUP.
JOHN HEDLUND.

Witnesses:

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