No. 670,291. Patented Mar. 19, 1901.

T. McSPIRIT.

MACHINE FOR CLEANING BLACKBOARD ERASERS.

(Application filed July 21, 1900.)

(No Model.)

Fig. 1.

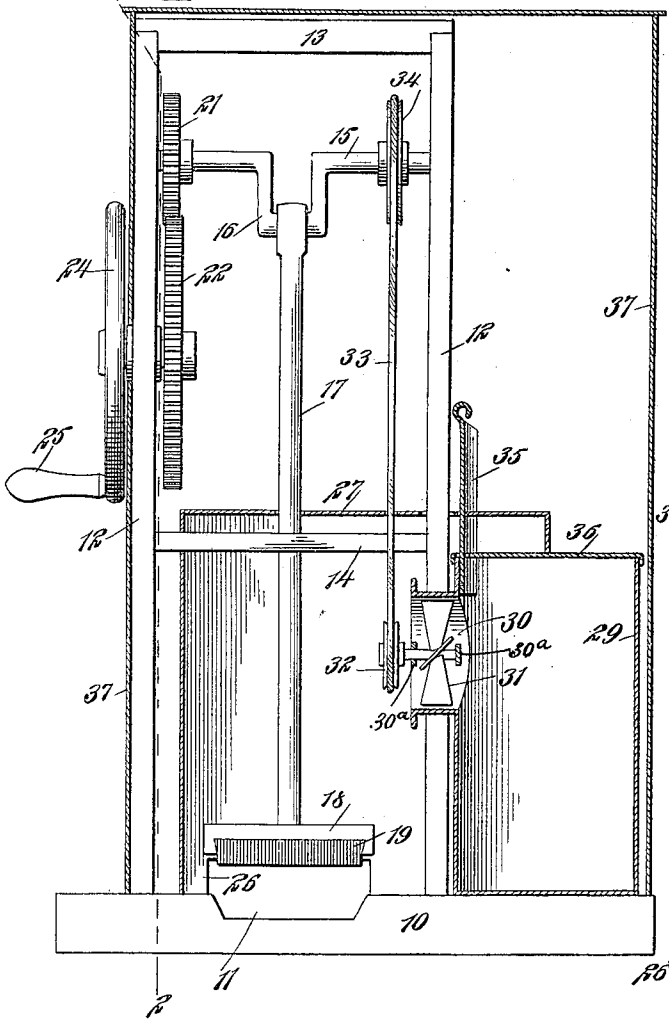
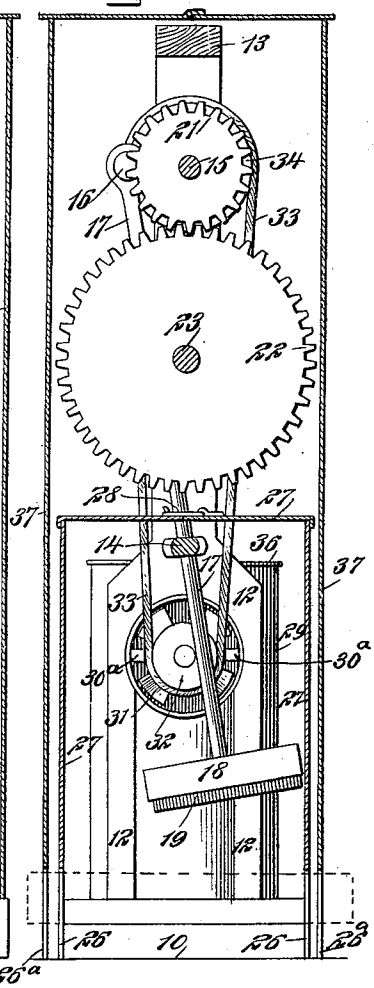


Fig. 2.



WITNESSES:

James F. Duhamel.

J. Bedeker.

INVENTOR

Terrence McSpirit.

BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

TERRENCE MCSPIRIT, OF NEW YORK, (LONG ISLAND CITY,) NEW YORK.

MACHINE FOR CLEANING BLACKBOARD-ERASERS.

SPECIFICATION forming part of Letters Patent No. 670,291, dated March 19, 1901.

Application filed July 21, 1900. Serial No. 24,456. (No model.)

To all whom it may concern:

Be it known that I, TERRENCE MCSPIRIT, a citizen of the United States, and a resident of the city of New York, (Long Island City, borough of Queens,) in the county of Queens and State of New York, have invented a new and Improved Machine for Cleaning Blackboard-Erasers, of which the following is a full, clear, and exact description.

One purpose of the invention is to provide a machine especially adapted for use in schools and which shall be so constructed that a blackboard-eraser may be placed in the machine and passed out of the machine thoroughly cleaned from adhering chalk.

A further purpose of the invention is to so construct the machine that none of the gearing will be exposed and so that no dust will escape from the machine.

Another purpose of the invention is to provide a removable receptacle used in connection with the machine which will receive all of the material released from the blackboard-erasers passed through said machine, which receptacle may be safely removed from the machine and with no danger of its contents escaping, the contents of the said receptacle being readily emptied wherever desired.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a vertical longitudinal section through the machine, and Fig. 2 is a vertical transverse section taken practically on the line 2 2 of Fig. 1.

The frame of the machine consists of a base 10, in which a recess 11 is made, adapted to receive the body portion of a blackboard-eraser, and when the eraser is passed into the said recess its rubbing-surface will be uppermost. Standards 12 are erected upon the base 10, and the standards are connected at the top by a cross-bar 13, and between their ends a second cross-bar 14 is carried from standard to standard. In the upper portion of the standards 12 a shaft 15 is journaled, provided with a central crank-arm 16, and a rod 17 is pivotally connected with the crank-arm 16 and is loosely passed through an opening in the lower cross-bar 14. At the lower end of the rod 17 a head-block 18 is secured, and this head-block is preferably provided with a dovetail groove in its under face, and in this grooved portion of the head-block a pad 19, of felt, rubber, or similar material, is detachably entered, the said pad being adapted to strike the upper surface of the blackboard-eraser placed in the machine to extract the dust and chalk therefrom.

The rod 17 and the head-block are given vertical and lateral reciprocating movement through the medium of the said crank-arm 16, and the shaft 15 is driven, preferably, by placing a pinion 21 on the shaft 15, which pinion meshes with a gear 22, secured on a suitable shaft 23, held to turn in one of the standards 12, and at the outer end of the shaft 23 a hand-wheel 24 is secured, and a handle 25 is attached to this wheel.

A casing 27, preferably made in two sections, as shown in Fig. 2, is placed around the rod 17 at a point over the intermediate cross-bar 14, and the said casing rests upon the base 10, inclosing the head 18 of the rod 17 and the detachable section 19 of the head. The casing 27 extends, preferably, beyond one of the uprights 12, as shown in Fig. 1, the top of the sections being provided with cuts or recesses to receive the upright, and said casing is adapted to receive and to prevent the escape of the dust and chalk that is cleaned from the blackboard-eraser. The sections of the casing 27 may be connected in any suitable or approved manner—as, for example, through the medium of a latch 28 (shown in Fig. 2)—and the casing is provided with a suitable opening through which the rod 17 freely passes. The extended portion of the casing 27 incloses a portion of a receptacle 29. This receptacle is provided with a collar extension 30, which is shown as extending through an opening in the standard or upright 12 adjacent to which it is located, as shown in Fig. 2. Within the collar extension 30 a fan 31 is mounted to revolve in bearings 30^a, and the fan-shaft at its inner end carries a pulley 32, over which a belt 33 is passed, and likewise over a pulley 34, secured upon the shaft 15.

The receptacle 29 is provided with a re-

movable top 36 and is adapted to receive all the material escaping from a blackboard-eraser, said material being drawn from within the casing 27 into the receptacle 29 by means of the fan 31. The standards or uprights 12 and the parts located between them, likewise the receptacle 29, are contained within an outer casing 37, removably placed on the base 10, and this outer casing 37 is also preferably made in two sections suitably connected, which sections are simply brought together over the entire structure and surround its base. Under such a construction it is obvious that a child may operate the device and that the operator can in no manner interfere with the interior parts of the machine, the hand-wheel 24 being the only part that is outside of the outer casing 37.

The receptacle 29, which receives the dust and the chalk, is provided with a slide 35, which is so placed that it will pass through the inner casing 27 and down past the collar extension 30, closing the same, and the slide is placed in its closed position when the receptacle 29 is to be removed for the purpose of emptying its contents, the slide being so made that it will pass through the casing 27; but if the slide is not so constructed the casing 27 is first removed before the receptacle 29 is taken out; but prior to removing the receptacle 29 the belt 33 is removed from the pulley 34, so that it may disengage the fan-pulley 32. The inner casing 27 is provided with openings 26, registering with the recess 11 in the base 10, and the outer casing 37 has corresponding openings 26^a made therein, so that the blackboard-eraser may pass freely through the machine during the process of cleaning.

In operation a blackboard-eraser (shown in dotted lines in Fig. 2) is introduced into the recess 11 through the openings 26 and 26^a in the casings, and as the hand-wheel 24 is turned the beating-head 18 will rise and fall, striking the cleaning-surface of the eraser and thoroughly beating the same. As the said beating-head rises and falls it has a lateral reciprocating motion, (indicated in Fig. 2,) so that at each stroke of the rod 17 the beating-head 18 after striking the cleaning-surface of the eraser will on leaving said surface tend to force the eraser out from the machine a given distance, or the eraser may be fed through the machine by hand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a machine for cleaning blackboard-erasers, a cleaning-head having a vertical and a lateral reciprocating movement, an operating mechanism for the said head, substantially as described, means whereby an eraser may be placed below the said head, a casing surrounding the said head, and a receptacle adapted to receive dust and chalk, connected with the said casing and removable therefrom, as specified.

2. In a machine for cleaning blackboard-erasers, a cleaning-head, a mechanism substantially as described, whereby a vertical and a lateral reciprocating movement is imparted to said head, means for placing an eraser beneath said head, a casing surrounding said head, a receptacle removably entering said casing, the entering portion of the said receptacle having a collar extension, a fan located in said extension, and means for rotating said fan, substantially as described.

3. In a machine for cleaning blackboard-erasers, the combination, with a frame, a crank-shaft journaled in the frame, a driving-gear for the crank-shaft, a rod carried by the crank of the crank-shaft, and a beating-head secured to the lower portion of the said rod, of a casing surrounding said head, through which the said rod freely passes, a receptacle removable from the casing and partially entering the same, the said receptacle having a tubular extension within the casing, a fan located within the said tubular extension, a driving connection between the fan and the said shaft, and means for introducing an eraser below the beating-head, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

TERRENCE McSPIRIT.

Witnesses:
JOHN ORPHEER,
HARRY E. MERRING.