

D. W. MOFFITT,
 ABRADING MACHINE.
 APPLICATION FILED MAR. 2, 1912.

1,056,437.

Patented Mar. 18, 1913.

Fig. 2.

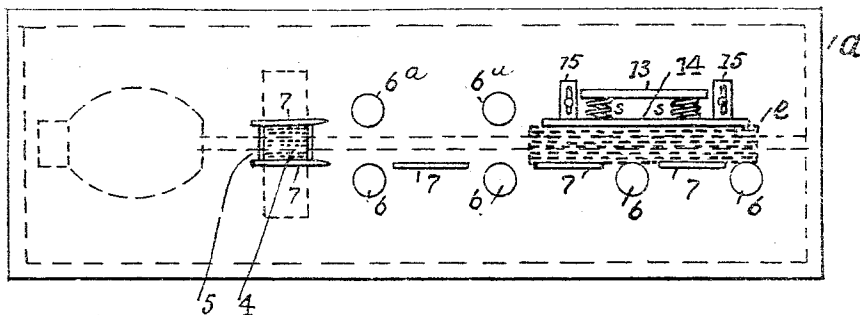


Fig. 3.

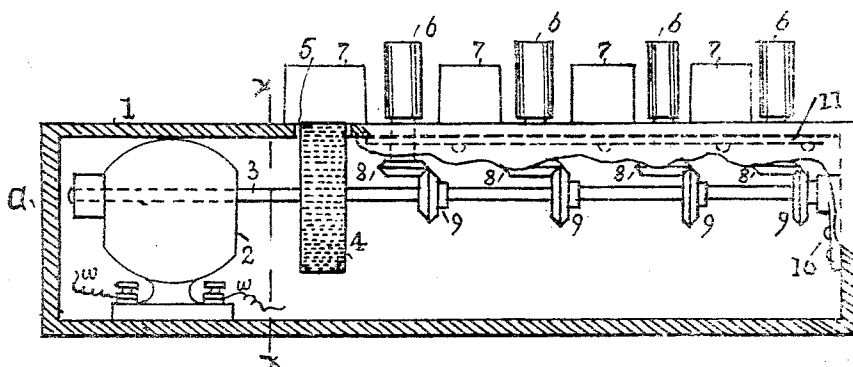


Fig. 1.

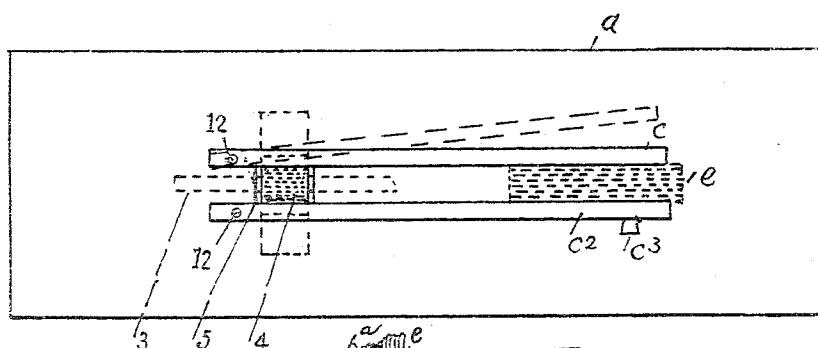
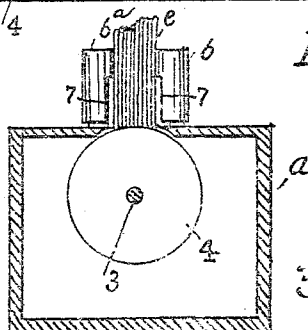


Fig. 4.



Attest.

L. A. Hill.
 John Martin.

Inventor:

Daniel W. Moffitt
 S. G. Willis, Jr.
 Attorney.

UNITED STATES PATENT OFFICE.

DANIEL W. MOFFITT, OF MALDEN, MASSACHUSETTS.

ABRADING-MACHINE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DANIEL W. MOFFITT, residing at Malden, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Abrading-Machines, of which the following is a specification.

It is a common practice to open sealed envelopes to secure the contained letter by means of a metal device which is inserted into the envelop and shearing the edge of the same, which with a large amount of mail matter is a slow method and attended with certain disadvantages such as the liability of cutting the contents.

The invention about to be described concerns means for opening a number of sealed envelopes at the same time in an expeditious and safe manner, and consists of a revolving abrading wheel within a casing whose upper surface is accessible through an opening in the casing, combined with a feeding and guiding attachment whereby a plurality of sealed envelopes may be guided over the face of the abrading wheel and their edges ground away so that the contents may be readily removed, the opened envelops being passed along into a proper receptacle. All of which I will now proceed to describe and point out in particular in the appended claims.

Of the accompanying drawings which illustrate and form a part of the specification:—Figure 1 is a plan view of one form of my invention. Fig. 2 is a plan view of another form of the same. Fig. 3 is a horizontal sectional view of the previous figure and Fig. 4 is a section on line *x x* of Fig. 3.

In the drawings *a* is a table or casing which may have open sides if preferred; 2 is an electric motor having leads *w w* to a source of current from which extends the shaft 3 having a bearing 10 in the end of the casing, and 4 is an abrading wheel preferably with a carborundum surface, whose upper periphery extends through an opening 5 in the top of the casing on about the level of its upper surface.

Referring to Fig. 1, *C C*² are guides pivoted respectively at 12 12, the lower one *C*² has a limiting stop *C*³ while the upper one is free to be moved upward as indicated in dotted lines. When a number of envelopes are to be treated they are gathered in a bunch as indicated by dotted lines *e* and are

placed between the guides *C C*² and clamped lightly and pushed between the guides toward the wheel 4 in a direction parallel with its axis over the opening 5, and as the wheel is supposed to be in motion the lower edges of the envelops are ground off from one end to the other, so that the contents may be extracted readily. Care of course must be taken not to press the envelops too hard upon the wheel so that only their edges are abraded and evenly from one end to the other. I find that this type of machine works well, but that the design represented by the other figures is quicker and does not require so much care in operation.

In the Figs. 2, 3 and 4 there are fixed guides 7, 7 on each side of the opening 5; and 6, 6, 6, 6 and 6^a 6^a are rotating guides on the ends of short spindles which extend into the interior of the casing and terminate with bevel gears 8, which mesh with the gears 9 on the shaft 3, these guides 6 are preferably of flexible rubber; and between the guides 6 are other fixed guides 7. To the right of Fig. 2 is a fixed standard 13, and 14 is an upright backing having the perforated lugs 15, 15 adapted to slide back and forth on screws, as shown, and between the standard 13 and the backing 14 are springs *s s*, to force them apart. When a bunch of envelops are to be operated on the backing 14 is forced against the springs *s s* and they are inserted between it and the opposite rotating guides 6, 6, by the movement of which they are carried horizontally along between the other rotating guides 6, 6, and 6^a 6^a and over the abrading wheel 4, and then outward, the operator's hand resting lightly upon them to keep them down and together so that they will all move together. By this design a continuous operation may be made, as fast as one bunch is carried along beyond the backing 14 another can be started. By a little practice the operator will determine the number of envelops that can be carried along by the rotating wheels 6, and the amount of manipulation required.

I claim as my invention:—

1. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, and means for guiding a package of envelops across said opening, said guiding means including spaced apart relatively stationary and yieldable

members arranged parallel with the axis of said wheel and between which the envelops of each package are stacked.

2. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, fixed guides secured to said table, and rotatable guides cooperating therewith, said guides being arranged in lines parallel with the axis of said roller.

3. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, and envelop guiding means comprising a row of alternating fixed and rotating guides, and a second row of rotating guides cooperating therewith.

4. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, fixed guides secured to said table, rotatable guides cooperating therewith, said guides being arranged in lines parallel with the axis of said roller, and means whereby a package of envelops may be started between said guides.

5. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, and envelop guiding means comprising a row of alternating fixed

and rotating guides, a second row of rotating guides cooperating therewith, and means whereby a package of envelops may be started between said guides.

6. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, and envelop guiding means comprising a row of alternating fixed and rotating guides, a second row of rotating guides cooperating therewith, and a spring pressed plate cooperating with the first mentioned row of guides.

7. A machine of the character described comprising a table provided with an opening, an abrading wheel rotatably mounted opposite said opening, fixed guides secured to said table, and rotatable guides cooperating therewith, said guides being arranged in lines parallel with the axis of said roller, and a spring pressed plate cooperating with said fixed guides.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 20th day of February 1912.

DANIEL W. MOFFITT.

Witnesses:

GEO. WILLIS PIERCE,
L. A. HILL.