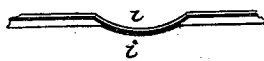
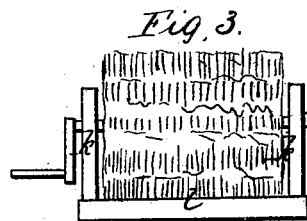
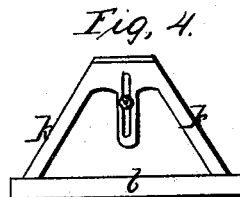
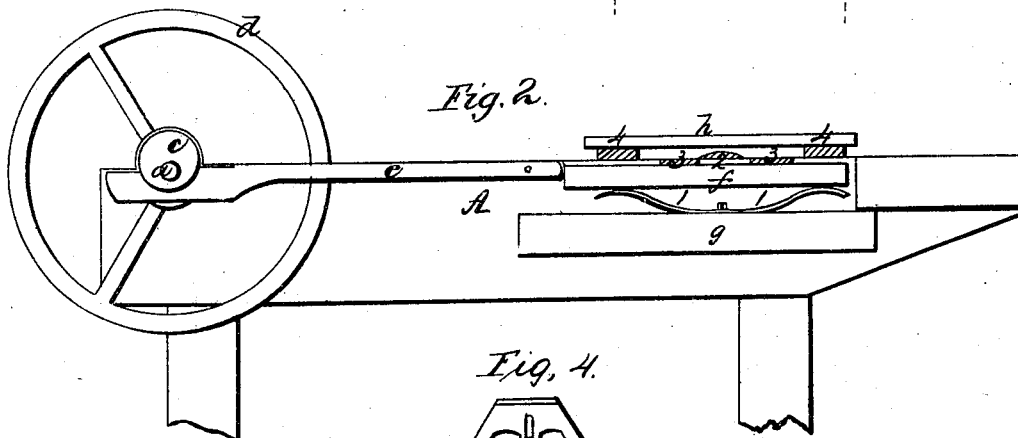
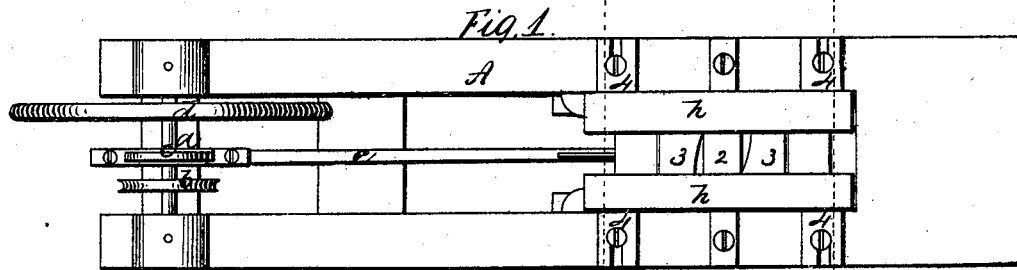


B. BABBITT.
BRUSH TRIMMER.

No. 4,814.

Patented Oct. 14, 1846.



Witnesses,
W. Merrill
Edw. H. Serrell

Inventor,
B. Babbitt

UNITED STATES PATENT OFFICE.

BENJ. BABBITT, OF NEW YORK, N. Y.

MACHINERY FOR TRIMMING BRUSHES.

Specification of Letters Patent No. 4,814, dated October 14, 1846.

To all whom it may concern:

Be it known that I, BENJAMIN BABBITT, of the city, county, and State of New York, manufacturer, have invented and made and applied to use certain new and useful improvements in the arrangement of mechanical means for what is technically called "trimming" of brushes for any general or particular use, such arrangement effecting the operation in a manner by which any required form may be given to the face of a brush with better effect and at less than usual cost by two alternating knives, or shear blades, acting beneath a fixed two-edged knife or blade with either straight edges or edges curved laterally to give any required shape, for which improvements I seek Letters Patent of the United States, and that the said improvements and the mode of constructing and using the same are fully and substantially set forth and shown in the following description and in the drawing annexed to and making part of this specification, wherein—

Figure 1, is a plan, and Fig. 2, a sectional elevation, of a trimming machine, as made with my improved arrangements, the like letters, and numbers, applying to the like parts in each figure.

A, is the bed of the machine, *a*, is the main shaft, and *b*, the driving drum, or pulley, to communicate with a treadle wheel below, or with any other competent motive power; *d*, is a fly wheel, *c*, is shown as an eccentric, but may be a crank, to connect the shaft *a*, to one end of the pitman *e*, the other end of which, is jointed to the vibratory knife carriage *f*. This is supported, and vibrates on, the rising ends, of two double ended springs *i*, *i*, set on bearers *g*, within the bed frame.

Upon the carriage *f*, are two knives 3, 3, formed with edges curving from one end, inward to the other end, so that their edges act on the upper side, with a shearing cut, against the under sides, and edges, of a broad two-edged knife 2, the ends of which are so secured down on the frame A, that the under side of the knife, itself, secures the parallel motion of the two vibratory knives beneath it, and when the lower knives are in rapid motion, the shearing cut, thus given, trims the face of a brush to any required

form, either flat, or rounding, with great celerity and precision.

The guide gages *h*, *h*, are changeably mounted on proper slides 4, 4, on the bed frame, and by adjusting these to the width of the bristles in the brush face, with a depth equal to the required length of staple in the bristles, on the workman placing the edges of the brush block on the guide gages *h*, *h*, and passing the brush either or both ways, over the knives, the brush face will be accurately and immediately trimmed, without any risk of injury to the hands of the workman, and the trash, or waste cuttings, falling away below, lessens the trouble that is needed, in clearing them from a brush, that is trimmed in the ordinary way. The detached figures marked *i*, *i*, represent knives, curved laterally, for the purpose of trimming brushes, that are required to be otherwise than straight, across the face, and for such purposes, these knives may be formed with any requisite corresponding lateral curvatures, on their edges.

For trimming what are technically known, as wheel brushes, knives of any required form may be used, in conjunction with the apparatus, shown in the detached Figs. 3 and 4. These show a side and end elevation, of a pair of center frames, *k*, *k*, mounted, adjustably, on the upper part of a pair of bearing slide blocks, *l*, *l*. These may be made to slide across the bed frame, in the position, shown by dotted lines, in Fig. 1, when trimming wheel-brushes that are to be straight in their cross face, or line of operation, or by placing the blocks *l*, *l*, longitudinally on the bed, and properly adjusting the centers, to act in concert with proper formed knives beneath, any required form, across the face, may be given to the wheel brush under operation. Rotation may be given to wheel brushes, when under operation, by a crank, or by any convenient means of connecting power to the mandrel and chuck, of the center frames.

It is not intended to claim any of the parts, employed for these purposes, as all are in common use in various ways, but

What I do claim as new and desire to secure by Letters Patent of the United States is—

The application of the two edged knife

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2 constructed and fixed, to direct and act
in conjunction with, the vibrating knives
3, 3, and gage guides *k, k*, adapted to the
form of the brush when employed for the
5 purpose of trimming the faces of brushes, the
whole arranged, constructed, applied, and
combined substantially as herein set forth
and shown.

In witness whereof I have hereunto set
my hand in the city of New York, this 10
twenty-fourth day of June, one thousand
eight hundred and forty-six.

BENJN. BABBITT.

Witnesses.

W. TERRELL,

EDW. W. TERRELL.