# I. Baker,

## Making Chair Seats.

No. 5,760. Patented Sep. 12, 1848.

Fig. 2.

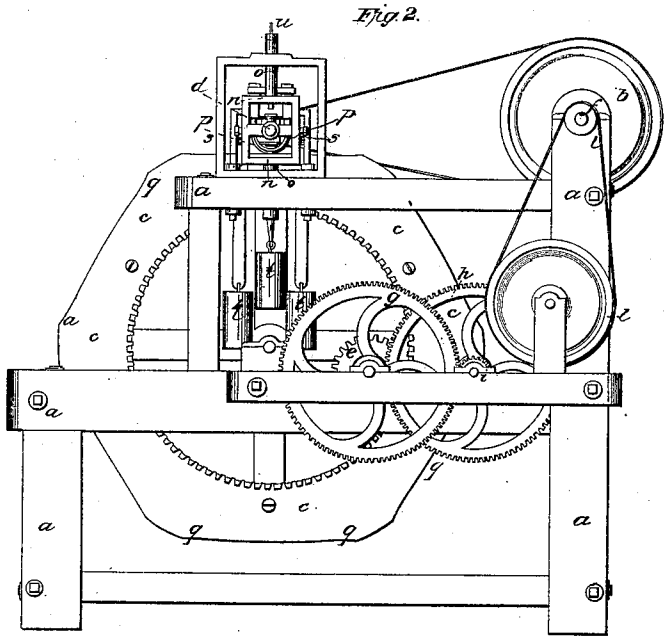


Fig. 1.

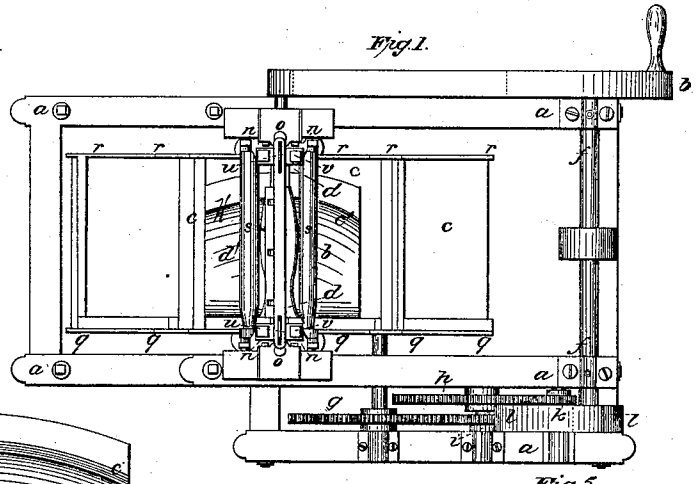


Fig. 3.

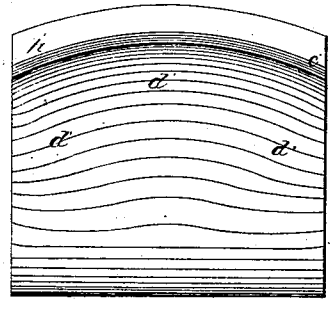


Fig. 5.

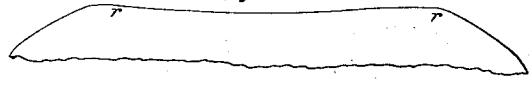
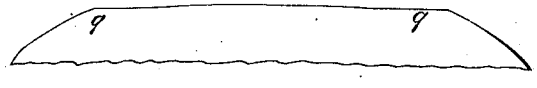


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ISAAC BAKER, OF WARWICK, MASSACHUSETTS.

## MACHINE FOR DRESSING CHAIR-SEATS.

Specification of Letters Patent No. 5,760, dated September 12, 1848.

*To all whom it may concern:*

Be it known that I, ISAAC BAKER, of Warwick, in the county of Franklin and State of Massachusetts, have invented a new and useful Improvement in the Method of Cutting Chair-Bottoms, and that the following description, taken in connection with the accompanying drawings hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvement by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

It is well known that the top face of the seat of wooden chairs is necessarily made concave, at or about the center, and that hitherto no machinery has been devised which would "gouge them out," so to speak, with sufficient accuracy to render them fit for use, and that consequently the necessary labor has been mainly performed by hand. By my improved method all hand labor is superseded and the seats come from my machine ready except sand papering, to be framed into chairs, and they can be turned out very rapidly.

The figures of the accompanying plate of drawings represent my new machine for cutting said chair bottoms.

Figure 1 is a plan of the machine. Fig. 2 is a side elevation, and Figs. 3, 4 and 5 are detail views which will be explained in the sequel.

*a a a a* in the several drawings, is the frame work of the machine, constructed as represented or in any other substantial form.

*b* is the driving drum or pulley, from which all the operative parts of the machine derive their motion.

The two main features of my apparatus are, first, a hexagonal shaped feeding frame, *c c c c;* Figs. 1 and 2 having curved guides on each side of each of its faces, which operate, as will be shown hereinafter, and secondly, a cylinder of curved knives, *d d* &c., whose cutting edges are curved so as to fit oppositely into the curve of the top face of the chair bottom. The feeding frame, *c c c c*, Figs. 1 and 2, is made hollow, and has on one side suitable cogged teeth as shown in Fig. 2, which engage with the teeth of the cogged pinion *e*, Fig. 2; which pinion is connected with the shaft, *f f*, on which the driving pulley is fixed, through the medium of the cogged wheels *g*, *h* and pinions *i*, *k*, and band and pulleys shown at *l l*. The cutting cylinder *d d*, is constructed as shown in the drawings or in any other suitable manner; the edges of the knives having the curves above suggested, and shown in Fig. 1; and said knives being firmly secured to the shaft or cylinder, *d*, *d*. The journals of this cylinder *d d*, rest in adjustable bearings in the rectangular frames, *n n—n n*, said frames being connected to sliding rods, *o*, *o o o* which move up and down in proper guides, as shown in Figs. 1 and 2, the motion being governed on each side of the machine by a bow-shaped bearer, *p p—p p*, Fig. 2, which rests on the guides, *q q*, *r r* &c., on the feeding frame *c c c c*. There is a pressure roller *s*, *s*, on each side of the cutting cylinder, and said rollers all rest on said guides, *q q* and *r r*, and have bearings in elongated slots formed in rectangular projections from the sides of the frames *n n—n n*, and said rollers and the frames *n n*, *n n*, are properly weighted, as shown at *t*, *t*, *t*, &c. The bow-shaped bearers, *p p p p* may be regulated by the adjusting screws, *u u*, which work in the blocks, *v*, *v*, to which said bearers are attached.

The blocks to be operated on, having the proper contour on the sides, are placed successively upon the several faces of the feeding frame, and kept thereon by the pressure rollers, *s s*. The several curves of the top face of the seat are shown by the shading in Fig. 3, and it will be seen that the curve, *b′ c′* must be straight across, while the concavity, *d′ d′ d′* depends as you approach the center; and, in order to cut these curves correctly, it is necessary that the two ends of the cutting cylinder should be raised and depressed; accordingly, and for this purpose, the guides *q q* &c., on one side of the feeding cylinder, *c c c c*, are made convex, while those on the other side at *r r*, &c., are made concave, as shown in detail in Figs. 4 and 5. The concave guides, it will be apparent, permit the bilge of the knives to cut the concavity *d′ d′ d′*, and the convex ones, at the same time, raise that portion of the knives that cut the curve *b′ c′*, so that it may be cut straight across or without any transverse concavity.

Having thus described my improvements, I shall state my claim as follows.

What I claim as my invention, and desire to have secured to me by Letters Patent, is—

The mechanical method, hereinabove described of cutting the top faces of chair bottoms, that is by a feeding frame, having convex and concave guides, as set forth, and operating as specified, in combination with a cylinder of curved knives and pressure rollers, arranged so as to move up and down, as set forth; the whole mechanical arrangement being substantially as set forth.

In testimony that the foregoing is a true description of my said improvements, I have hereto set my signature this sixth day of October in the year 1847.

ISAAC BAKER.

Witnesses:
JANUS S. EMMETT,
WM. BARNARD.