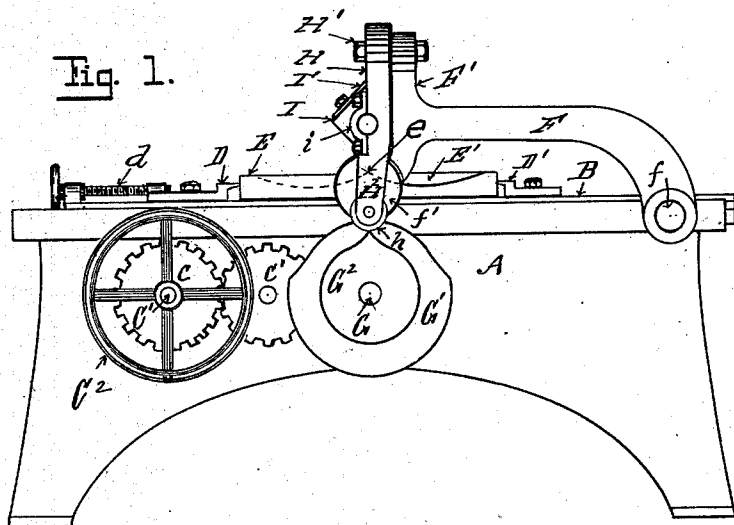
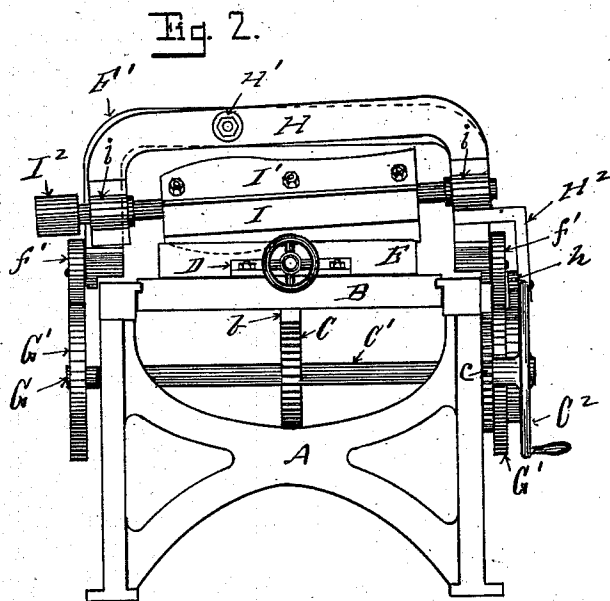


C. A. STARK.
CHAIR SEAT SURFACING MACHINE.

(Application filed Aug. 9, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.
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No. 714,529.

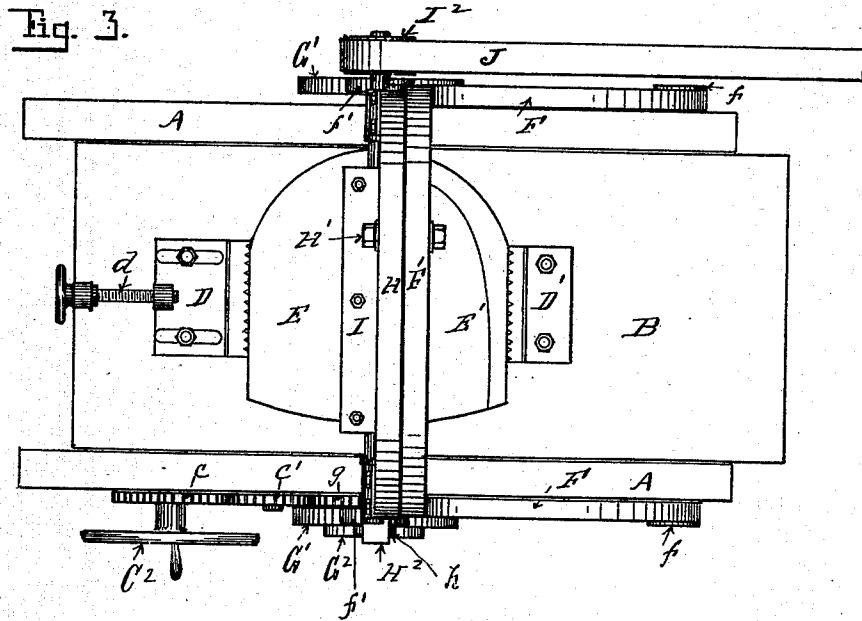
Patented Nov. 25, 1902.

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(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

CHARLES A. STARK, OF UNION CITY, PENNSYLVANIA.

CHAIR-SEAT-SURFACING MACHINE.

SPECIFICATION forming part of Letters Patent No. 714,529, dated November 25, 1902.

Application filed August 9, 1902. Serial No. 118,997. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. STARK, a citizen of the United States, residing at Union City, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Chair-Seat-Surfacing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to improvements in chair-seat-surfacing machines, and has for its object the production of a machine where-with a saddle-seat surface can be produced in a chair-seat at a single operation. I accomplish this result by constructing my machine with a reciprocally-traveling bed to which a chair-seat can be clamped and by providing a rotary cutter-cylinder mounted on a swinging yoke, the supporting-frame of which is adapted to be raised and lowered as the chair-seat travels under the cutter-cylinder, the movements of said swinging yoke and of the said supporting-frame being controlled by means of cam mechanism so as to produce the desired result.

These and other features of my invention are hereinafter set forth and described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view in elevation of my improved chair-seat-surfacing machine. Fig. 2 is an end view of the same. Fig. 3 is a top or plan view of the same.

In the drawings illustrating my invention, A is the frame of the machine, and in the top of this frame there is a sliding table B, provided on its under surface with a rack *b*, with which a gear-wheel C, mounted on the shaft C', intermeshes. The gear-wheel shaft C' is mounted in the frame A and is provided with a hand-wheel C² at one side of the frame for operating it. On the top of the table B, I provide clamping mechanism D D' *d* for securing a chair-seat E thereon.

At the sides of one end of the frame A, I pivot arms F on pivots *f*, which extend toward the central part of the machine, where

they are secured to a yoke F', so that the arms F and the yoke-frame F' are substantially an integral structure swinging up and down freely upon the pivots *f f*. Through the center of the machine-frame A there is a shaft G, provided with cams G' at each side of the frame. This shaft G is rotated by means of a gear-wheel *c* on the hand-wheel shaft C', an intermediate gear-wheel *c'*, and a gear-wheel *g* on the shaft G, so that the rotation of the shaft G and the cams G' thereon are in unison with the travel of the table B. On one end of the shaft G there is also another cam G², as and for the purpose herein-after set forth.

Upon the yoke-frame F there are friction-rollers *f' f'*, which rest upon the cams G' and support the yoke-frame, which as the cams rotate raise and lower the yoke-frame.

Upon the yoke-frame F', I mount a yoke H by means of a pivot H', which passes through the yoke-frame F' and the yoke H at one side of the center of the yoke and yoke-frame, as is clearly shown in Figs. 2 and 3. In this yoke I mount a cutter-cylinder I in boxes *i i* on said yoke. The edges of the blades I' of the cutter-cylinder I are made irregular in shape, as illustrated in Fig. 2, to conform to the portion of the chair-seat E to be hollowed out. The cutter-cylinder I is also provided with a belt-pulley I² for the reception of a driving-belt J. On one end of the yoke H there is an arm H², provided with a friction-roller *h*, which contacts with the cam G² on the shaft G, as illustrated in Fig. 1, which cam, operating therethrough upon the yoke H, rocks the yoke H and the cutter-cylinder I, carried thereby, upon the yoke-frame F', as illustrated in Fig. 2.

In operation when a chair-seat E is secured upon the table B and is moved under the cutter-cylinder I the cams G' operate to lower the yoke-frame F', the yoke H, and the cutter-cylinder, so as to cut the surface of the seat away at E', as shown in Figs. 1 and 3, until nearly the center of the seat is reached, when the cam G², acting upon the yoke H, raises one end of it, together with one end of the cutter-cylinder mounted therein, so as to form the central ridge *e* at the front of the seat, as illustrated in dotted lines in Fig. 1, and as the roller *h* passes off of the point of

the cam G^2 the end of the yoke and cutter-cylinder carried thereby move down again, so as to cut the remainder of the surface of the chair-seat E in the same form as that part designated by E'.

Having thus described my invention so as to enable others to construct and utilize the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a chair-seat-surfacing machine, of a frame, a sliding table mounted thereon, a yoke-frame above said sliding table, means for automatically raising and lowering said yoke-frame, a yoke pivoted upon said yoke-frame, means for automatically oscillating the yoke upon said yoke-frame, and a cutter-cylinder mounted in said yoke, substantially as and for the purpose set forth.

2. The combination in a chair-seat-surfacing machine, of a frame, a sliding table mounted thereon, rack-and-gear mechanism for operating said table, a yoke-frame above said sliding table, cams at the sides of the machine upon which the yoke-frame rests and which operate to raise and lower it, a yoke pivoted to said yoke-frame, a cam at one side of the machine-frame which operates to oscillate

said yoke upon the yoke-frame, a cutter-cylinder mounted in said yoke, and gearing connecting the table-moving gear and the cam-shaft, substantially as and for the purpose set forth.

3. The combination in a chair-seat-surfacing machine, of a frame, a sliding table mounted thereon, clamp mechanism for securing chair-seats thereto, rack-and-gear mechanism for operating said table, a yoke-frame mounted upon arms pivoted to the machine-frame, cams at the sides of the table for raising and lowering said yoke-frame, a yoke pivoted to said yoke-frame at one side of the center thereof, a cam at one side of the machine-frame operating to raise and lower one end of said yoke so as to oscillate it upon the yoke-frame, a cutter-cylinder mounted in said yoke, and gearing connecting the table-moving mechanism, and the cam-moving mechanism, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. STARK.

Witnesses:

G. J. WARDEN,
E. B. LANDSRATH.