(No Model.)

2 Sheets—Sheet 1.

C. A. WRIGHT.

CARD BEVELING MACHINE.

No. 313,639. Patented Mar. 10, 1885.

Fig. 1

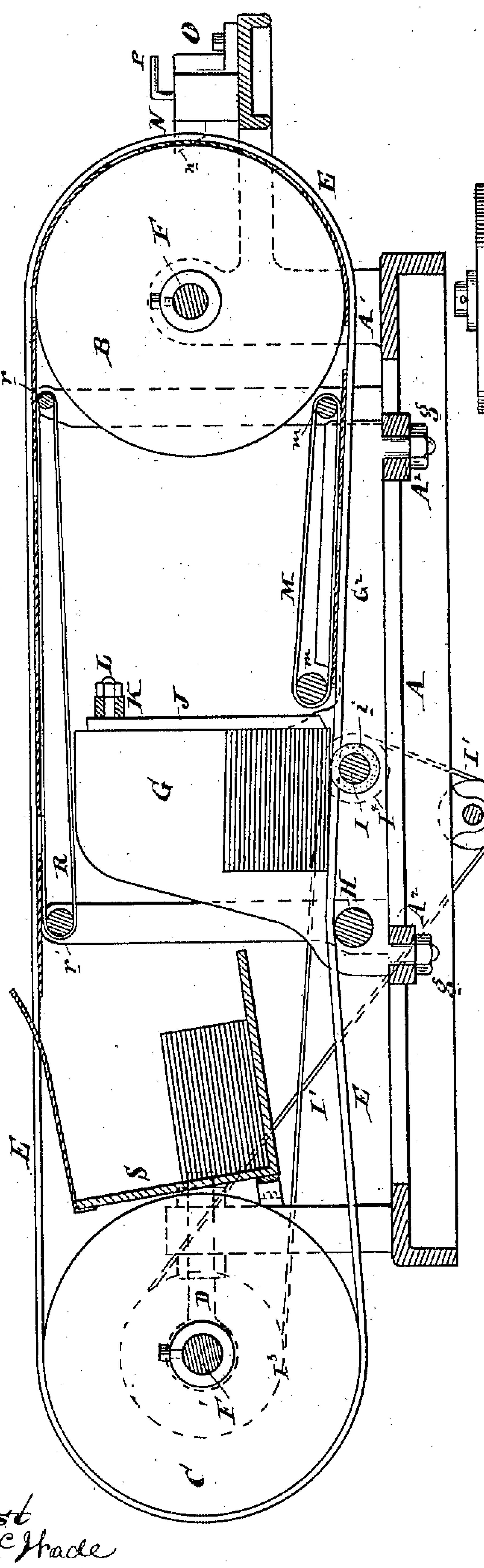
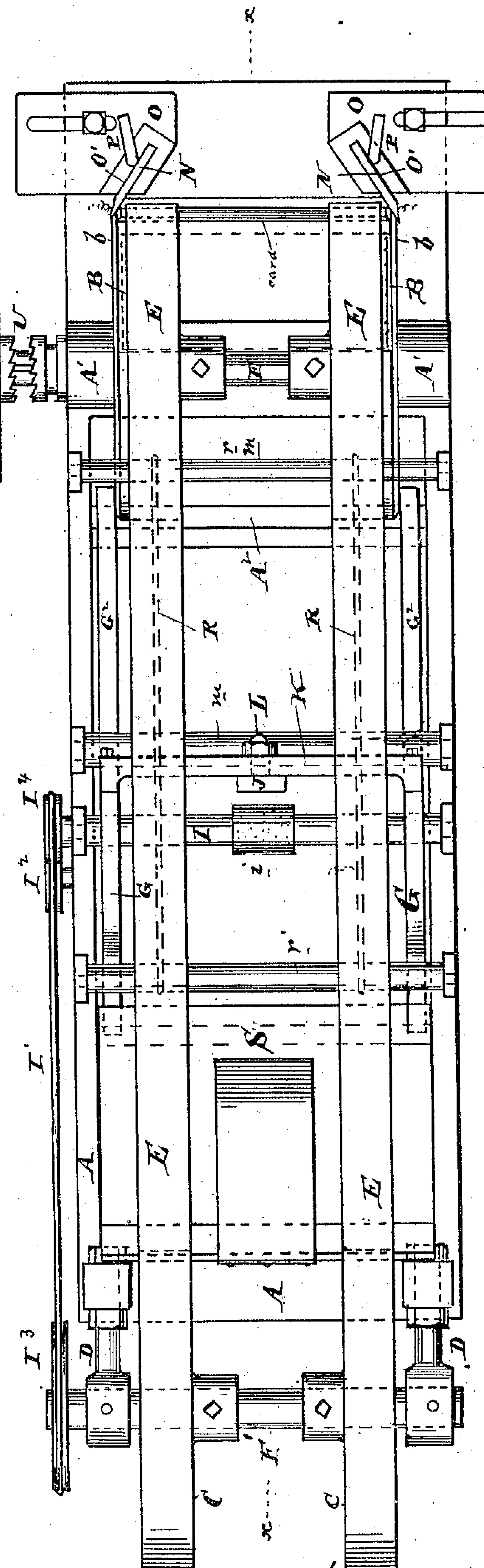


Fig. 2



Attest
W. S. McWade
Harry R. Schafer

Inventor
Charles A. Wright
By his atty.
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N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

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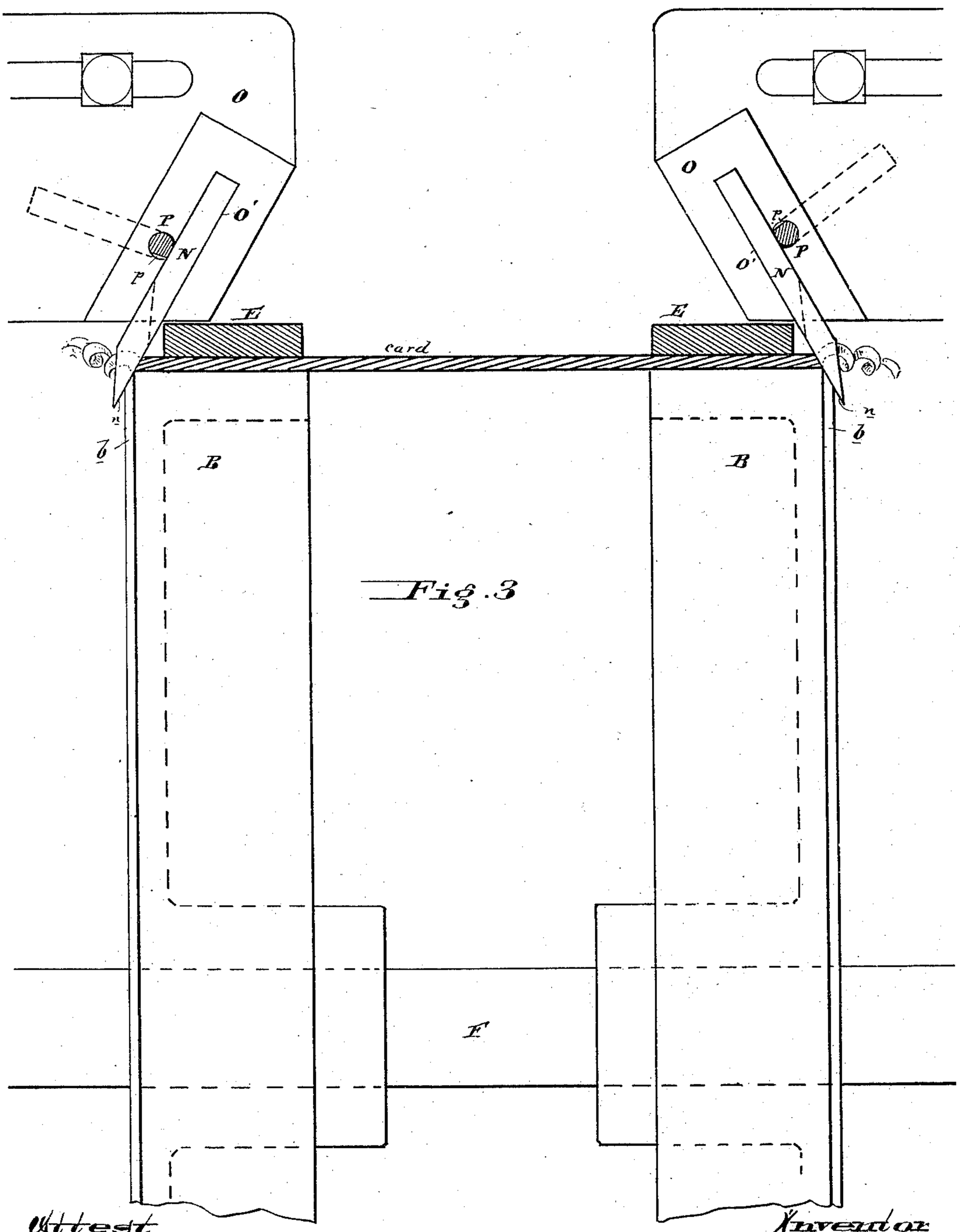

Fig. 3

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UNITED STATES PATENT OFFICE.

CHARLES A. WRIGHT, OF PHILADELPHIA, PENNSYLVANIA.

CARD-BEVELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 313,639, dated March 10, 1885.

Application filed February 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. WRIGHT, of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Card-Beveling Machines, of which the following is a specification.

My invention has reference to card-beveling machines; and it consists in endless bands arranged to travel around band-wheels and carry the cards, clamping them firmly against the face of the wheels, whereby the said cards are held against lateral movement during the trimming or beveling action, combined with cutters against which said cards are pressed during their passage about said wheels; further, in a card-beveling device, as above set forth, combined with automatic feeding mechanism, substantially as hereinafter described, to deliver said cards to said endless bands one after the other, and in details of construction hereinafter claimed, all of which are fully set forth in the following specification and shown in the accompanying drawings, which form part thereof.

The object of my invention is to provide automatic mechanism whereby cards may have their edges beveled and both the cards and beveled surfaces made respectively uniform in size. Being placed in the machine in large packs, the cards are automatically treated separately, and finally delivered in a beveled and packed condition.

In the drawings, Figure 1 is a sectional elevation of a card-beveling machine embodying my invention on line X X of Fig. 2. Fig. 2 is a plan view of same, and Fig. 3 is an enlarged view showing process of cutting.

A is the bed-plate or frame.

B are metal wheels, preferably of chilled iron, and are secured to a shaft, F, held in bearings A′. These wheels B may be formed entirely of chilled iron; or their flanges or rims, or simply the beveled edges *b*, may be of chilled iron, as desired. Upon one end of said shaft are the drive-pulley T and clutch U, to stop or start the machine, which clutch may be operated by hand or foot power. Supported at the other end of frame A and by adjustable brackets D is another shaft, F′, to which are secured the wheels C, set in line with wheels B. Over wheels B and C bands E are placed, and are put under tension by brackets D. This band E on the bottom passes over the idler H, to give it a slight inclination to assist the automatic feed.

G² are guides to insure the cards being laterally adjusted before passing around the wheels, and may be made integral with the plates G, or formed separate and made adjustable, if desired, on the frame of the machine. As shown, they are formed integral with the said plates G. Secured between the wheels B C are the plates G, which are provided with lugs *g*, furnished with nuts on their ends, which lugs pass through slots A² in the frame and enable the plates G to be adjusted laterally. Between these plates G the stacked cards are placed.

K is a slotted cross-bar, and J is a vertical bar adjustable in said slot by nut L, and has its lower end just clear of the bands E, so that only one card at a time can pass from under.

I is a shaft provided with a rubber band, *i*, which in rotating draws out the bottommost card from below bar J and feeds it between the bands E and guide-cords M, which pass over rollers *m*. This shaft I is rotated by band I′, which passes about pulleys I², I³, and I⁴, obtaining its power from shaft F′.

N N are stationary cutters, which may be of any desired construction, and may be supported in adjustable supports O, having slots O′, in which said cutters rest, and are secured therein by keys P, having one side flattened, as at *p*, which keys are turned to lock the cutters in position. The cutting-edges of these cutters are preferably beveled, as shown, and are set at an angle to the face of wheels B, their cutting-edges lying over the beveled edges *b* of the said wheels B, as shown in Figs. 1 and 2.

R are guide cords or bands, and run over rollers *r r*, and are located below the bands E as they pass above.

S is a receiving table or box, and is adapted to receive the beveled cards as they pass from between the bands R and E.

The operation is as follows: The cards as they are fed from the stack by roller *i* pass between bands E and M, and are conveyed in succession between bands E and wheels B, and

are clamped firmly against the faces of said wheels while passing over them. This clamping action also curves them, making them more rigid and less liable to displacement when fed against the beveling-cutters N. After passing the cutters where they are beveled, as shown in Fig. 3, they are delivered between bands E and R, and are carried back and discharged into the box S one upon the other, as shown. The beveling is done on the two opposite sides simultaneously, and to be completed on all four sides they must pass through the machine twice.

By adjusting the various parts laterally, cards of various widths may be beveled.

The machine may be used for simply trimming cards without beveling them, if desired, by merely adjusting the cutters.

While I prefer the construction shown, it may be modified in various ways without departing from my invention.

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

1. In a card beveling or trimming machine, mechanism, substantially as described, to bend or curve the card, in combination with a cutter arranged at an angle to said card, substantially as and for the purpose specified.

2. In a card beveling or trimming machine, mechanism, substantially as described, to bend or curve the card, in combination with a stationary cutter arranged at an angle to said card, and devices, substantially as set forth, to feed said card to said cutting and bending device, substantially as and for the purpose specified.

3. In a card beveling or trimming machine, the combination of endless feed-bands, wheels about which said bands travel, and stationary cutters arranged at an angle to said bands and arranged close to the outer edges of said wheels, substantially as and for the purpose specified.

4. In a card beveling or trimming machine, the combination of endless feed-bands, wheels about which said bands travel, an automatic feeding mechanism, substantially as described, to deliver the cards in succession to said bands, and stationary cutters arranged at an angle to said bands and arranged close to the outer edges of said wheels, substantially as and for the purpose specified.

5. In a card beveling or trimming machine, the combination of endless feed-bands, wheels about which said bands travel, an automatic feeding mechanism, substantially as described, to deliver the cards in succession to said bands, a delivering mechanism, substantially as described, by which the beveled cards are stacked, and stationary cutters arranged at an angle to said bands and arranged close to the outer edges of said wheels, substantially as and for the purpose specified.

6. In a card beveling or trimming machine, a wheel, in combination with a cutter arranged close to said wheel, and mechanism, substantially as described, to hold the cards against the face of said wheel and carry them up and around with said wheel and against the cutter, substantially as and for the purpose specified.

7. In a card beveling or trimming machine, a wheel having chilled or hardened beveled edges, in combination with a cutter arranged close to the beveled edge of said wheel, and mechanism, substantially as described, to hold the cards against the face of said wheel and carry them against the cutter, substantially as and for the purpose specified.

8. The combination of wheels B and C with bands E, means, substantially as described, to put said bands under tension, and cutters N, substantially as and for the purpose specified.

9. The combination of wheels B and C with bands E, a feeding device, substantially as described, to deliver the cards to said bands in succession, cutters N, bands R, and receiving plate or box S, substantially as and for the purpose specified.

10. The combination of wheels B and C with bands E, a feeding device consisting of plates G, shaft I, band *i*, and bar J, cutters N, bands R, and receiving plate or box S, substantially as and for the purpose specified.

11. The combination of wheels B and C with bands E, a feeding device, substantially as described, consisting of plates G, shaft I, band *i*, roller H, and bar J, cutters N, bands R, and receiving plate or box S, substantially as and for the purpose specified.

12. The combination of wheels B and C with bands E, a feeding device, substantially as described, to deliver the cards to said bands in succession, cutters N, bands R and M, and plate or box S, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

CHARLES A. WRIGHT.

Witnesses:
W. S. McWADE,
JAS. S. BREEN.