

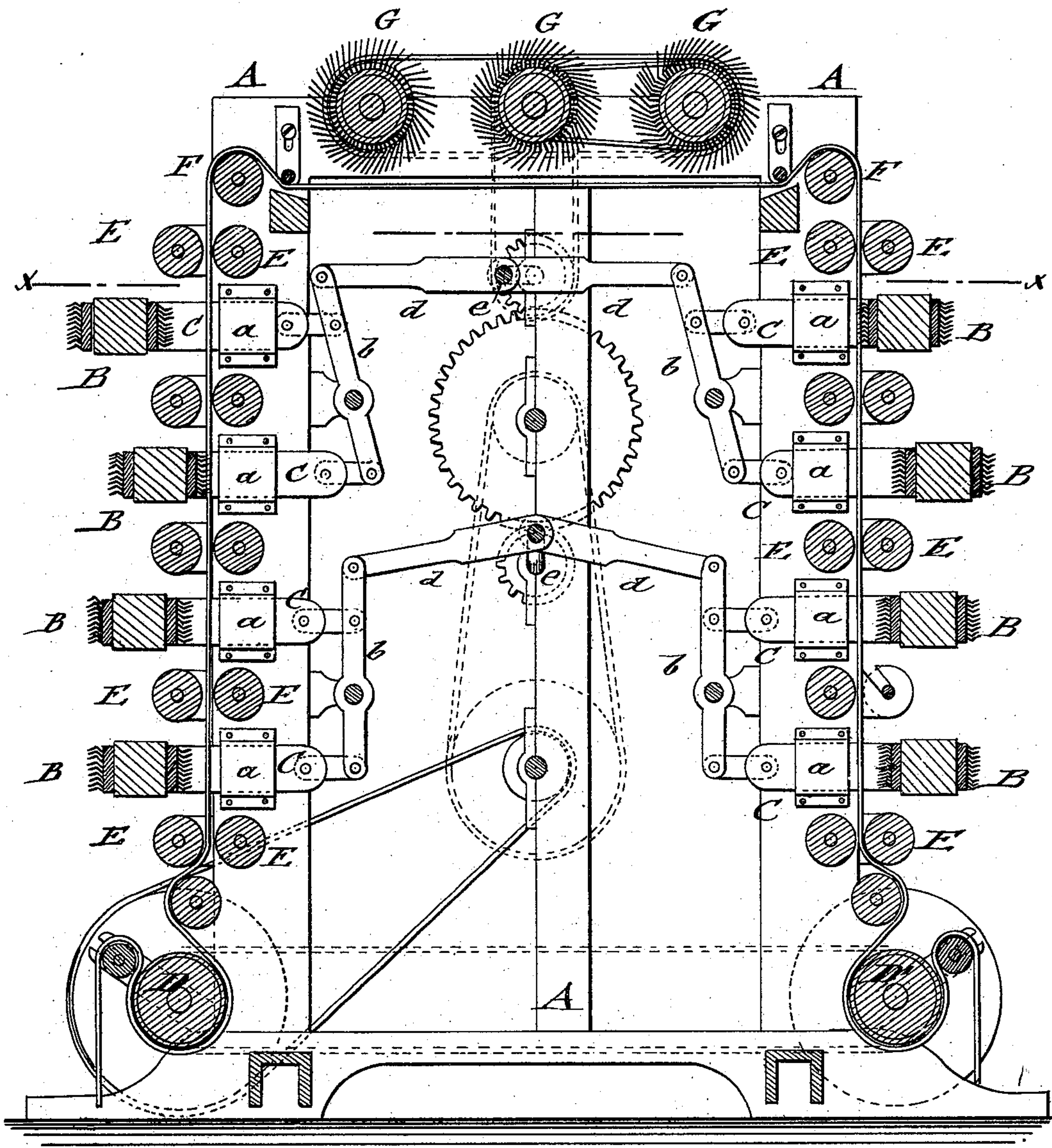
C. GERBER, Sr., & C. WOELFEL.

GIGGING-MACHINE.

No. 172,991.

Patented Feb. 1, 1876.

*Fig: 1.*



WITNESSES:

*Chas. Nida*  
*A. F. Perry*

INVENTOR:

*C. Gerber, Jr. and*  
*C. Woelfel.*

BY

*mmmm*  
ATTORNEYS.

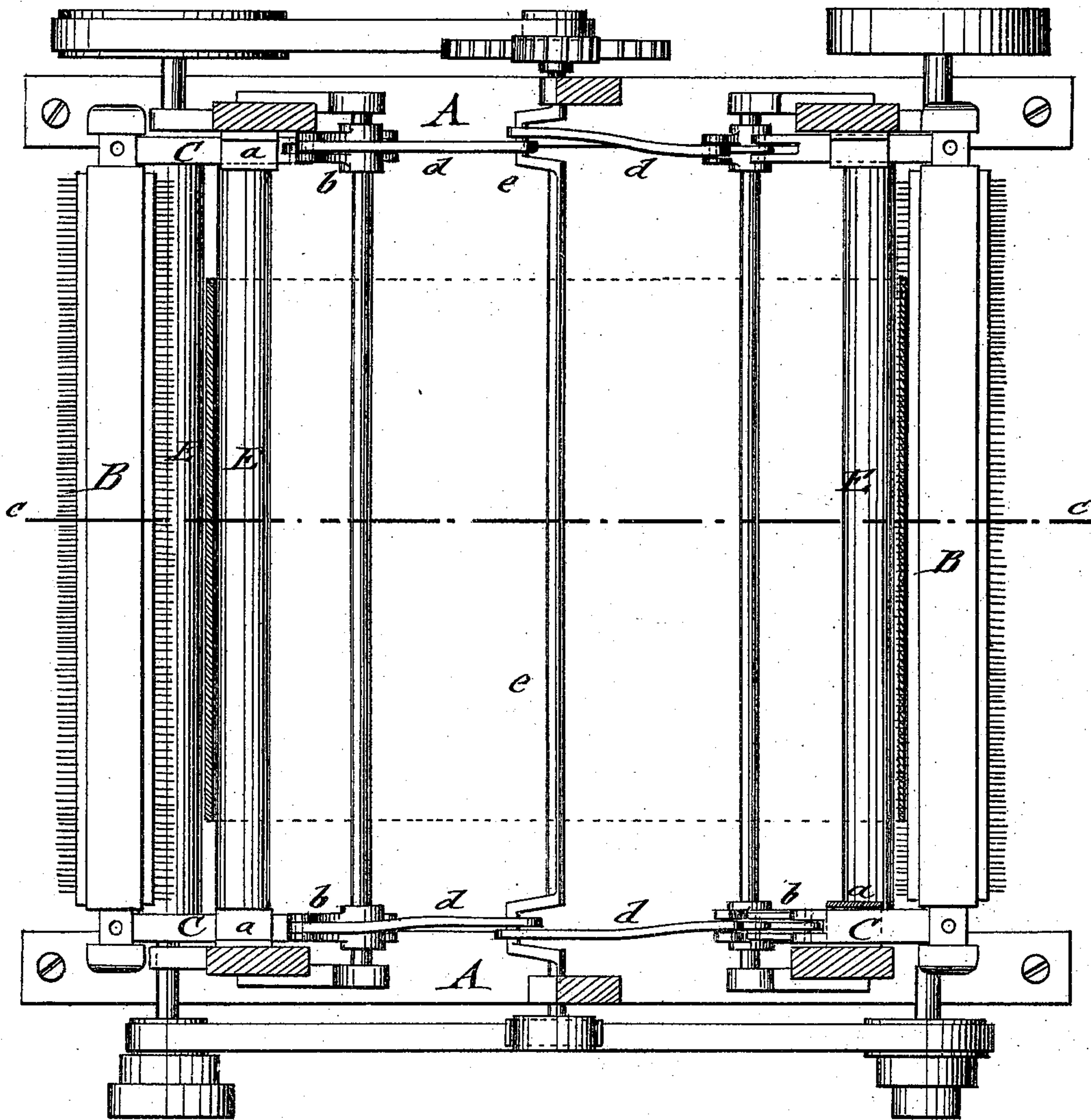
2 Sheets—Sheet 2.  
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*Fig: 2.*



WITNESSES:

*Chas. Nida*  
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# UNITED STATES PATENT OFFICE.

CARL GERBER, SR., AND CHRISTIAN WOELFEL, OF WEBSTER, MASS.

## IMPROVEMENT IN GIGGING-MACHINES.

Specification forming part of Letters Patent No. 172,991, dated February 1, 1876; application filed September 4, 1875.

*To all whom it may concern:*

Be it known that we, CARL GERBER, Sr., and CHRISTIAN WOELFEL, of Webster, in the county of Worcester and State of Massachusetts, have invented a new and Improved Gigging-Machine, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section on the line *c c*, Fig. 2, of our improved gigging-machine; and Fig. 2, a horizontal section of the same on the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of our invention is to furnish an improved machine for dressing cloth in a superior and rapid manner.

The invention consists in combining, with the stretching and guiding rolls of a napping-machine, sliding napping-cards, arranged between each pair of guide-rolls, and adapted to reciprocate in planes at right angles thereto.

In the drawing, A represents an upright frame of rectangular shape, and of a size corresponding to the number of reciprocating wire cards B employed. The cards B are of square shape, with wire cards at one or all the sides, and attached by spring-catches, clamping-screws, or in other suitable manner, so as to be readily detachable, for adjusting the cloth to slide-pieces C, which are guided in bands *a* of frame A, and operated by fulcrumed lever-rods *b*, connected by crank-rods *d* to crank-shafts *e*. The crank-shafts *e* are revolved by gear-wheel connection with the driving-shaft, which revolves also, by suitable belting, the feeding and stretching rollers D D'.

The woolen cloth passes up at one side of frame A, between guide-rolls E, which are arranged in pairs at both sides of the cards; then over the top rolls F, below the napping-rollers G, to the opposite side of frame A, and then down between opposite guide-rolls and cards to the stretching-rollers D', which are connected, by belt and cone pulleys, with the

feeding-rollers at the opposite side, in such a manner that the required tension of the cloth is produced throughout the machine.

The outer rolls E are removable, while the inner are applied stationary to frame A, to allow the ready placing of the cloth on the gig.

The alternately-reciprocating motion of the cards B forces the same into the cloth, and draws, by the fine hooks, the loose fibers in even manner to the surface without producing the waste and irregularities of the cylinder-cards.

The quick withdrawal of the cards from the cloth gives them no chance to stick, and overcomes thereby the objectionable rigidity of the rotating wire cards, while doing the dressing in a more perfect and rapid manner than the teasels, but without the expensive and troublesome features of the same.

The cloth is dressed by being passed a certain number of times through the machine, and is then treated by the napping-cylinders G, which give uniformity to the surface, and are revolved from the driving-shaft.

The superior action of the reciprocating wire cards and their evident economy recommend the machine for dressing of woolen and other fabrics.

I am aware that it is not new to combine with stretching and guide rolls independent teasel-plates that move in the arc of a circle; also, that it is not new to cause a teasel-plate to strike the cloth a succession of blows; but

What I claim is—

The combination, with stretching-rolls D D' and guide-rolls E F, of napping-cards B, arranged between each pair of guide-rolls, and adapted to reciprocate in planes at right angles to the cloth, as and for the purpose specified.

CARL GERBER, SR.  
CHRISTIAN WOELFEL.

Witnesses:

CARL GERBER, Jr.,  
FERTINANT WALTER.