C. F. SIEBER.

Soap-Cutting Machine.

No. 164,400. Patented June 15, 1875.

Fig. 1

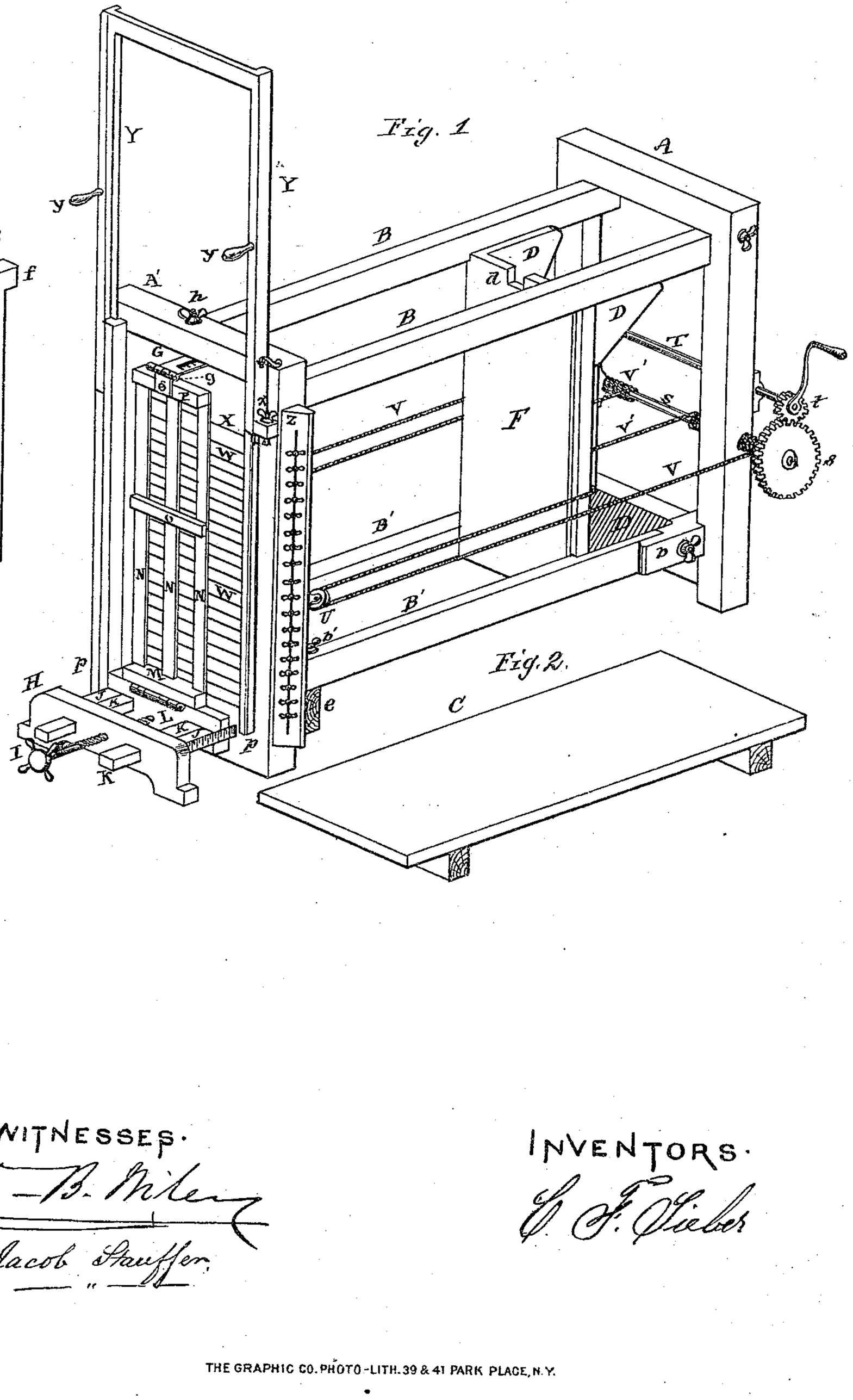
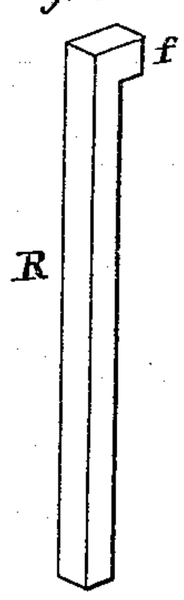


Fig. 2.

Fig. 3



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UNITED STATES PATENT OFFICE.

CHARLES F. SIEBER, OF HARRISBURG, ASSIGNOR OF ONE-HALF HIS RIGHT TO HERRMAN MILLER, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN SOAP-CUTTING MACHINES.

Specification forming part of Letters Patent No. **164,400**, dated June 15, 1875; application filed May 20, 1875.

To all whom it may concern:

Be it known that I, CHARLES F. SIEBER, of the city of Harrisburg, Dauphin county, in the State of Pennsylvania, have invented certain Improvements in Soap-Cutting Machines, of which the following is a specification:

The nature of this improvement consists in the intimate connection of a hinged graduated gage with a fixed cutter-frame provided with a series of adjustable cross-wires and an intermediate cutting-frame sliding vertically in grooved ways on the fixed cutting-frame, constituting, jointly, the front of the machine, and determining the width and thickness of each bar cut off in a vertical series from the front of a mass of soap as it comes from the molds. Said mass is fed up by means of a follower connected with ropes to a windlass. The bottom or truck can be removed. By this arrangement the cutting into bars can be suspended without detriment and again resumed, as the mass will keep sufficiently moist for days, which is not the case when the mass is first cut into slabs.

The accompanying drawing, with letters of reference marked thereon, and a brief explanation, will enable those skilled in the art to make and use the same.

Figure 1 is a perspective view of the machine, showing the bottom or truck removed, as also the supplemental follower detached. (Shown respectively by Figs. 2 and 3.)

The frame-work is shown by the front and rear frames A′ A and the top and bottom side rails B B and B′ B′. The front, A′, constitutes the fixed cutter-frame. The side face of the corner post of frame has a projecting piece, Z, provided with a slot nearly its entire length for a series of screw-bolt wire-holders for giving the wires W tension, and for adjusting and securing them by means of binding-screws. On the outer face of said frame-posts are grooved ways *p*, in which a vertical frame, Y, with handles *y*, slides up and down, with its single cutting-wire X on a tension binding screw and nut, *x*, thus operating in its sliding motions upon the outer face of the fixed cutter-frame A′. There is a foot-block, H, connected, by side pieces J, with a graduated scale, to the under cross-piece of the frame A′. This foot-block is mortised to receive the arms K, connected with the base L of the sliding gage, the ends being boxed out to receive the side pieces J, on which it slides, actuated by the mill-headed or handled adjusting-screw I centrally through H into L or base of gage, the joined slats N, by the lower cross-piece M, being connected by a strong hinge, *m*. These gage-slats N are joined centrally by a cross-piece, O, and at top by a cross-piece, P, provided with a plate, Q, having eyes for a bolt or pin, *g*, to receive the eye on the end of a slotted and graduated plate, G, made adjustable under the top cross-piece or frame A′ by a binding-screw nut and headed bolt, *h*. Thus the combined slats N or sliding gage can be adjusted to any point between the foot-block and fixed cutter-frame accurately and parallel to the same, and on which latter the sliding cutter has its vertical motion. The lower side rails B′ have a lap-splice at *b*, the joint being secured by a screw-bolt and nut entering horizontally. The front part of the rail is secured, by a vertical screw-bolt, *b′*, to a cross-piece, *e*, on which it also rests. By running the follower back behind the splice the rail is readily removed. The mass of soap, whether weighing five hundred or one thousand pounds, as it comes from the mold, is laid on the table or truck-bottom C and run into place between the cutter-frame and follower, and the detached side rail put in its place. The follower F has bracket guide-braces D above and below, sliding on and between the upper and lower side rails. To the back of the follower ropes V V′ are attached. One is carried forward and around pulleys U on the front frame A′ and carried back to the windlass S, and winds in one direction on the outside of the frame. The other ropes V′ wind the reverse way upon the same shaft or windlass S. On the inside of the rear frame A a shaft, T, with a pinion and crank-handle, *t*, drives the cogged wheel *s* on the shaft or windlass S. Thus the follower pushes the mass up bodily against the horizontal wires W out against the adjusted gage-bars N. This cuts the mass for that distance horizontally, determining the thickness

of the bars. The sliding frame Y, previously raised and secured, is now brought down by hand or otherwise, and cuts off a vertical series of bars of the desired width directly from the front of the mass. By withdrawing the pin *g* it disconnects the plates Q and G, when the combined gage can be laid down to a horizontal position on its hinged base and foot-block H and the cut pile of bars removed, and the operation repeated. The notch *d* in the top of the follower F is to receive the hook *f* on the supplemental follower R, used in cutting the last series of bars of soap from the mass.

I am aware that there are various devices and combinations claimed in machines for cutting soap into slabs and bars, in which fixed frames with adjustable cross-wires, in slots and otherwise, as also ropes, windlass, truck-bottoms, and the like, are interchangeably and variously arranged; but I am not aware of any arrangement which combines the fixed sliding frame or cutters and gage in the manner and for the purpose of cutting off a series or vertical pile of bars directly from the mass of soap, substantially as herein shown and described.

The machine is simple, comparatively cheap, easily managed, and affords facilities highly desirable.

I do not claim any of the parts, separately considered, apart from my general or special combination and arrangement, which may be stated as follows:

1. In combination with a fixed frame, A′, provided with the slotted side piece Z and adjustable wires W, the combined gage N O P, hinged to the sliding base L, foot-block H, graduated connections J, and adjusting-screw I, and slide-arms K, substantially as and for the purpose specified.

2. In combination with the grooved ways *p* on the outer face of the fixed cutter-frame A′, the vertically-sliding frame Y, with its single wire X, for cutting off a vertical series of bars of soap from the front of the mass, the whole constructed and operating substantially in the manner set forth.

3. In combination with the frames A A′ and top and bottom rails B B′ of the machine, the upright follower F, with its notch *d*, and rear guide-brackets D, above and below on each side, sliding on and between the upper rails B and lower detachable rails B′, operated back and forth by a single windlass or shaft, S, by means of the separate ropes V V′ and gearing *t s*, the whole constructed substantially as and for the purpose specified.

C. F. SIEBER.

Witnesses:
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