

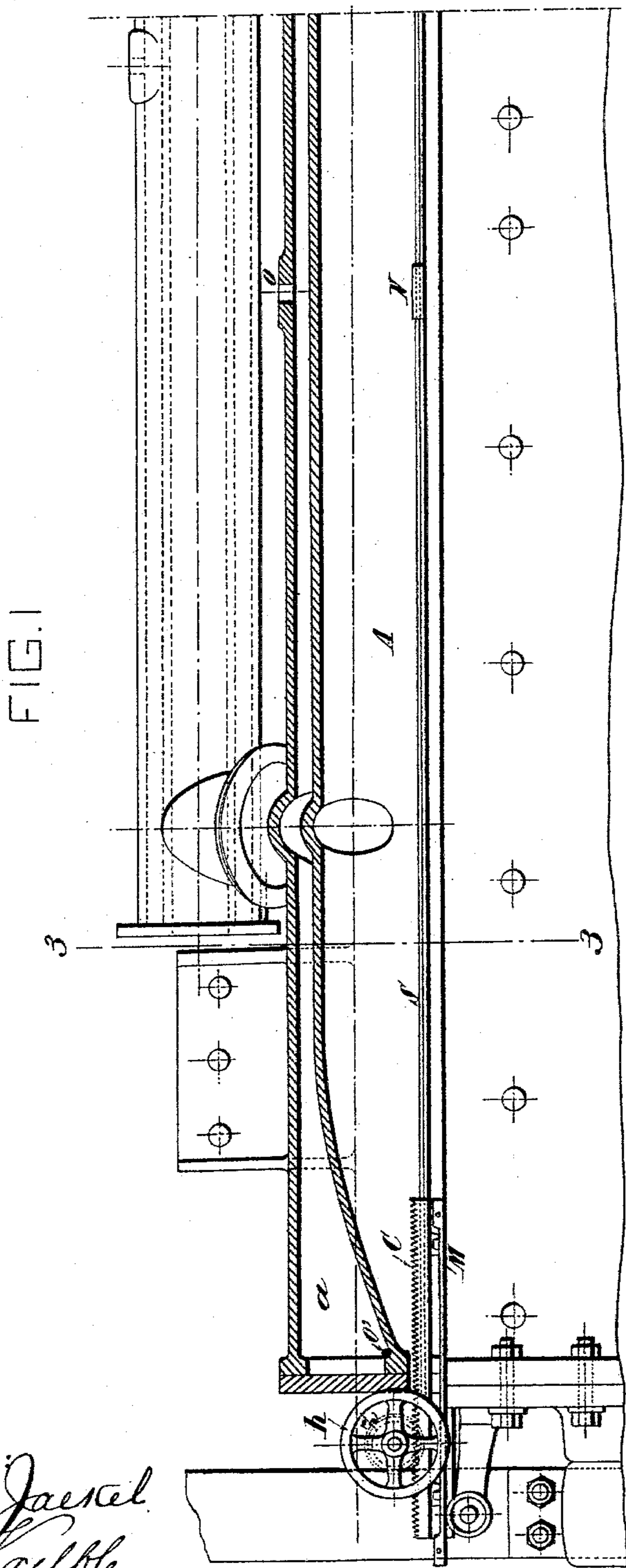
(No Model.)

3 Sheets—Sheet 1.

F. BINDER.  
APPARATUS FOR SINGEING WOVEN FABRICS.

No. 602,813.

Patented Apr. 19, 1898.



WITNESSES:

*Geo. W. Jaenel*  
*Carl Kaubly*

INVENTOR

*Felix Binder*  
BY *James H. Raegner*  
ATTORNEYS

(No Model.)

3 Sheets—Sheet 2.

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FIG. 3.

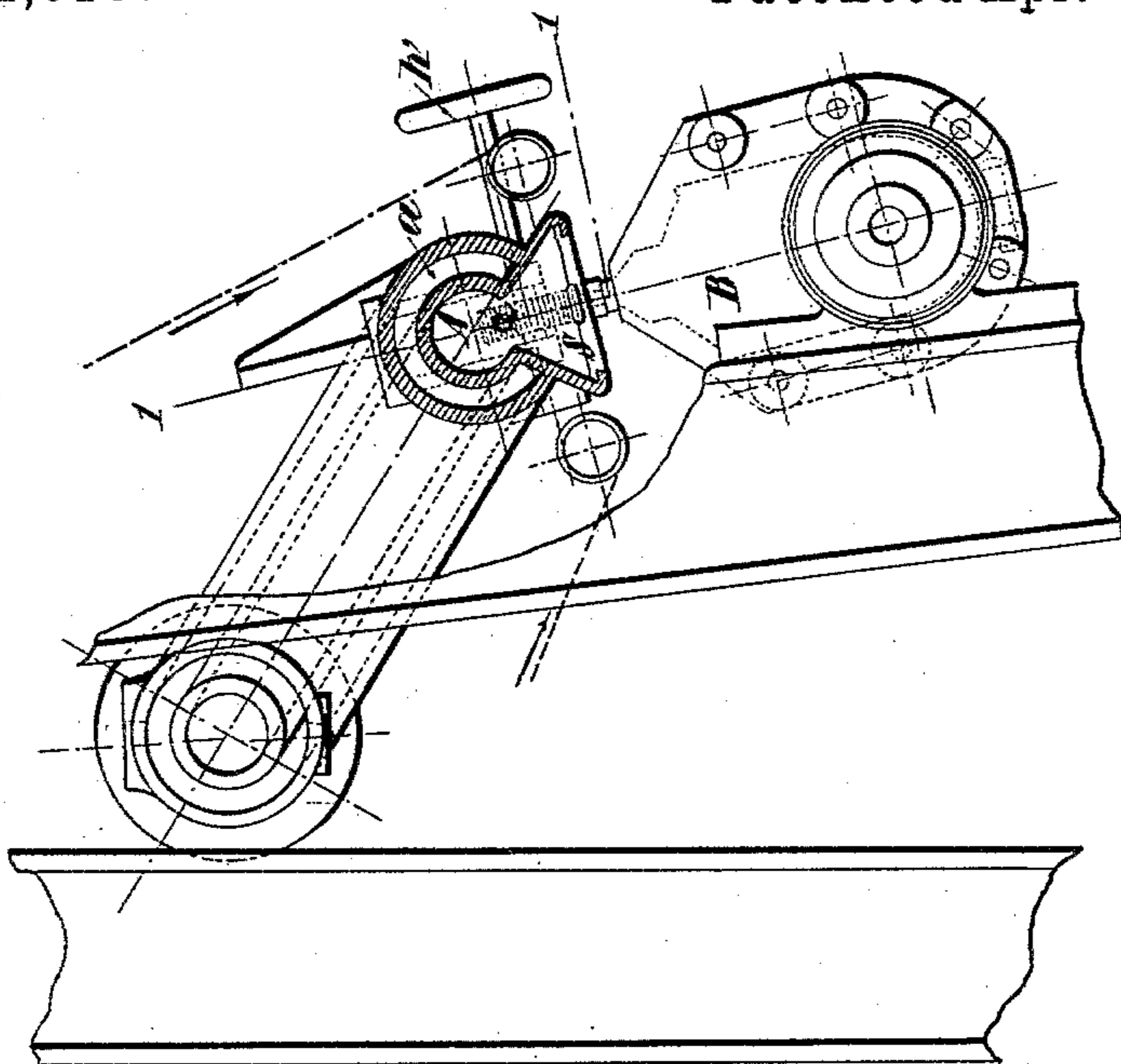
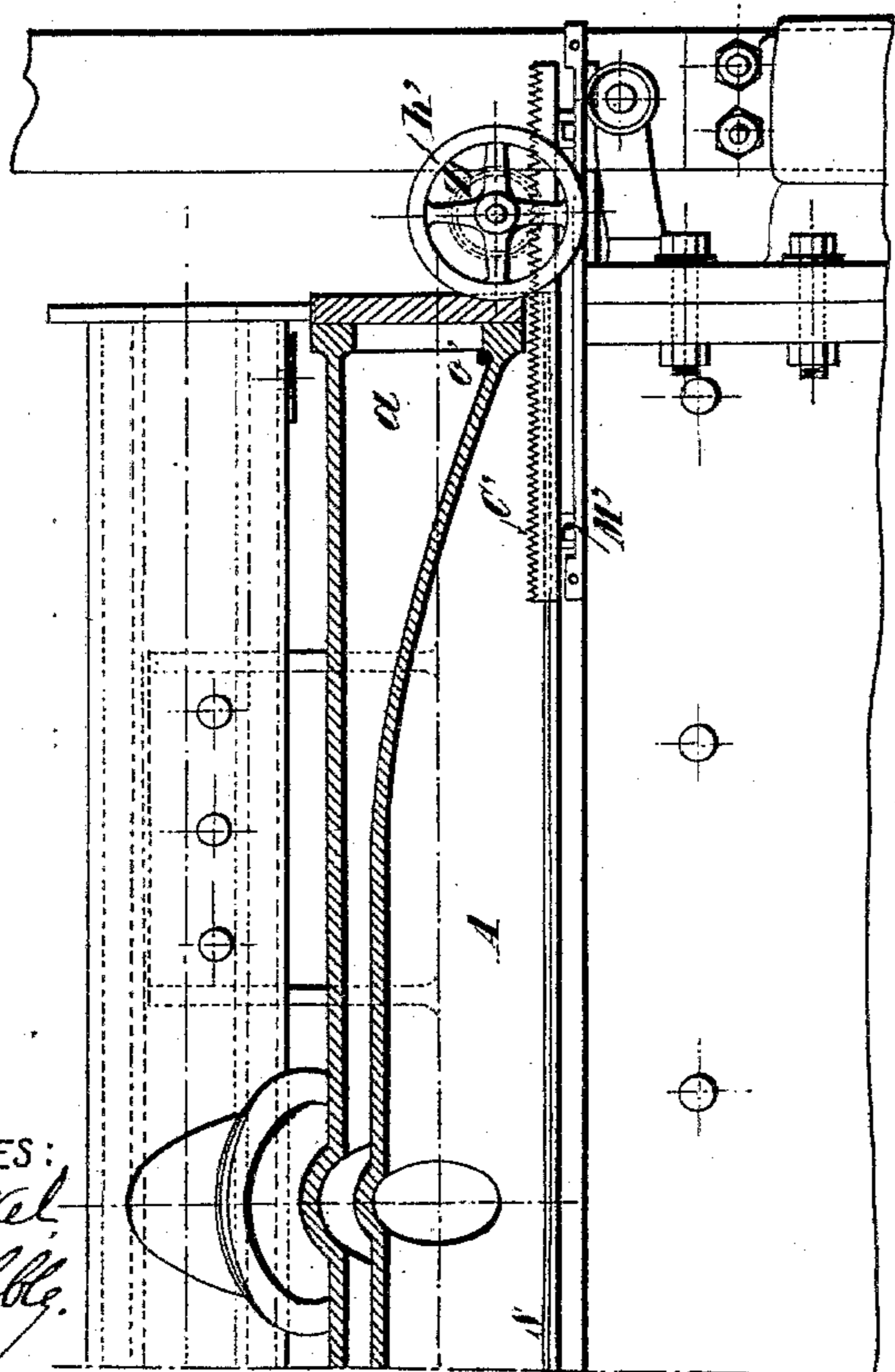


FIG. 2.



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(No Model.)

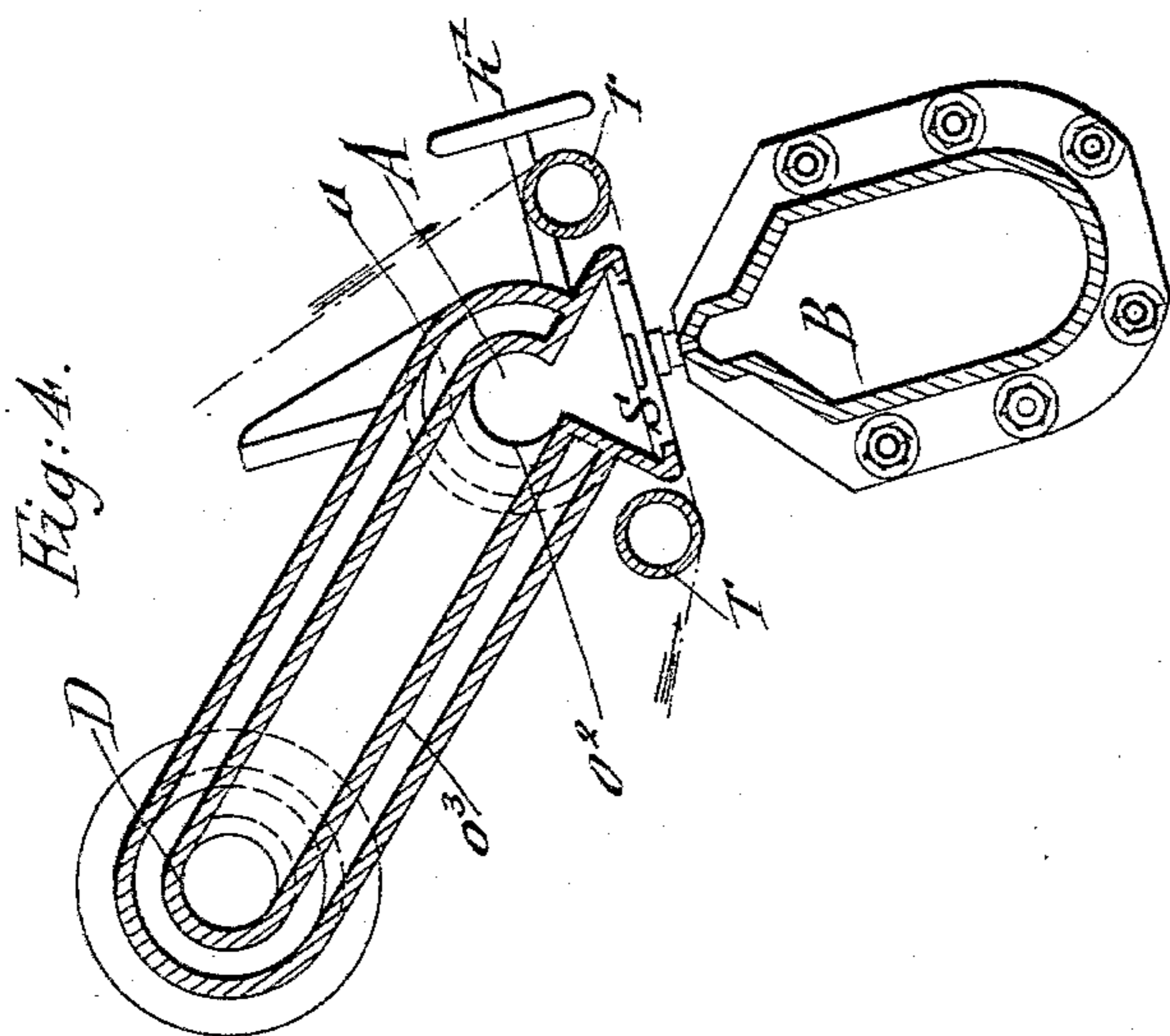
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Patented Apr. 19, 1898.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

FELIX BINDER, OF MOSCOW, RUSSIA, ASSIGNOR TO THE SOCIÉTÉ DE LA  
MANUFACTURE D'INDIENNES EMILE ZUNDEL, OF SAME PLACE.

## APPARATUS FOR SINGEING WOVEN FABRICS.

SPECIFICATION forming part of Letters Patent No. 602,813, dated April 19, 1898.

Application filed November 6, 1897. Serial No. 657,678. (No model.) Patented in France December 24, 1896, No. 262,542;  
in Belgium December 24, 1896, No. 125,365, and in Italy December 26, 1896, XXXII, 43,472.

*To all whom it may concern:*

Be it known that I, FELIX BINDER, a citizen of the Empire of Germany, residing in Moscow, in the Empire of Russia, have invented certain new and useful Improvements in Apparatus for Singeing Woven Fabrics and Textile Fibers in General, (for which Letters Patent were granted to me in France, No. 262,542, dated December 24, 1896; in Belgium, No. 125,365, dated December 24, 1896, and in Italy, XXXII, 43,472, dated December 26, 1896,) of which the following is a specification.

This invention relates to an improved apparatus for singeing textile fabrics and textile fibers in general; and the invention consists of an apparatus for singeing textile fabrics which comprises a jacketed suction-tube having a bottom aperture and connected in a suitable manner with a suction-fan. The jacket surrounding the suction-tube is provided with inlet and outlet orifices for supplying water for cooling the suction-tube, a burner-tube of any approved construction being located below the aperture of the jacketed tube, so that the flame is drawn through the fabric to be singed by the suction of the air. The length of the opening in the burner-tube is regulated by means of slide-plates that are adjusted by racks and pinions or any other suitable mechanism, according to the width of the fabric to be singed.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section on line 1 1, Fig. 3, of my improved apparatus for singeing textile fabrics. Fig. 2 is a vertical longitudinal section of one end of the same, drawn on a larger scale. Fig. 3 is a vertical transverse section on line 3 3, Fig. 1; and Fig. 4 is a vertical transverse section taken through one of the inclined suction-tubes.

Similar letters of reference indicate the same parts.

In the singeing apparatus heretofore in use certain difficulties were encountered, which consisted in the heating of the suction-tube by the flame of the burner-tube, so that an irregular burning of the jets of the burner-tube resulted and that thereby the jets were

not uniformly aspirated through the web of the fabric to be singed. This irregular action of the singeing apparatus heretofore used is avoided by using a suction-tube A, provided with a cooling-jacket *a*. The suction-tube A carries at its lower part a flaring portion with inwardly-bent edges, forming an aperture *s*, across which the fabric to be singed is passed, it being guided by means of rollers *r r*, arranged one at each side of the aperture *s*. The burner-tube B is arranged below the orifice *s* and produces the singeing of the fabric in the usual manner. The length of the aperture of the burner-tube B can be regulated according to the width of the piece of fabric to be singed by means of two slide-plates *M M'*, which are guided in suitable manner on the burner-tube and which are adjusted by means of racks *C C'*, connected with said plates, said racks being engaged by pinions *z z*, the shafts of which carry hand-wheels *h' h*. By turning the hand-wheels in one or the opposite direction the slide-plates *M M'* are moved forward or backward over the ends of the burner-tube, so as to regulate thereby the length of the flame, according to the width of the textile fabric to be singed.

The suction-tube A is provided with a central opening *o* for the inlet and end openings *o'* for the outlet of the cooling-water. It is further provided with suction-openings *o<sup>2</sup>*, connected by inclined tubes *o<sup>3</sup>* with a cylinder D, that is connected with the suction-fan. (Not shown in the drawings.)

The apparatus shown in the drawings is arranged for singeing two pieces of textile fabric at the same time. For this purpose a transverse plate N is arranged at the center of the burner-tube, so as to close the burner-tube at that point and separate thereby the fabrics. By the construction of the suction-tube described, and especially by the cooling-jacket on the same, the jets of the burner-tube burn with regular homogeneous flames, so that no irregularities in singeing or loss of heat are produced.

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

An apparatus for singeing textile fabrics,

consisting of a suction-tube provided with a flaring portion having a longitudinal aperture, a cooling-jacket extending around its upper part, a burner-tube below said aperture, and means for aspirating the flame through the textile fabric passing across the aperture of the suction-tube, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FELIX BINDER.

Witnesses:

H. MENZEL,  
F. CASPARI.