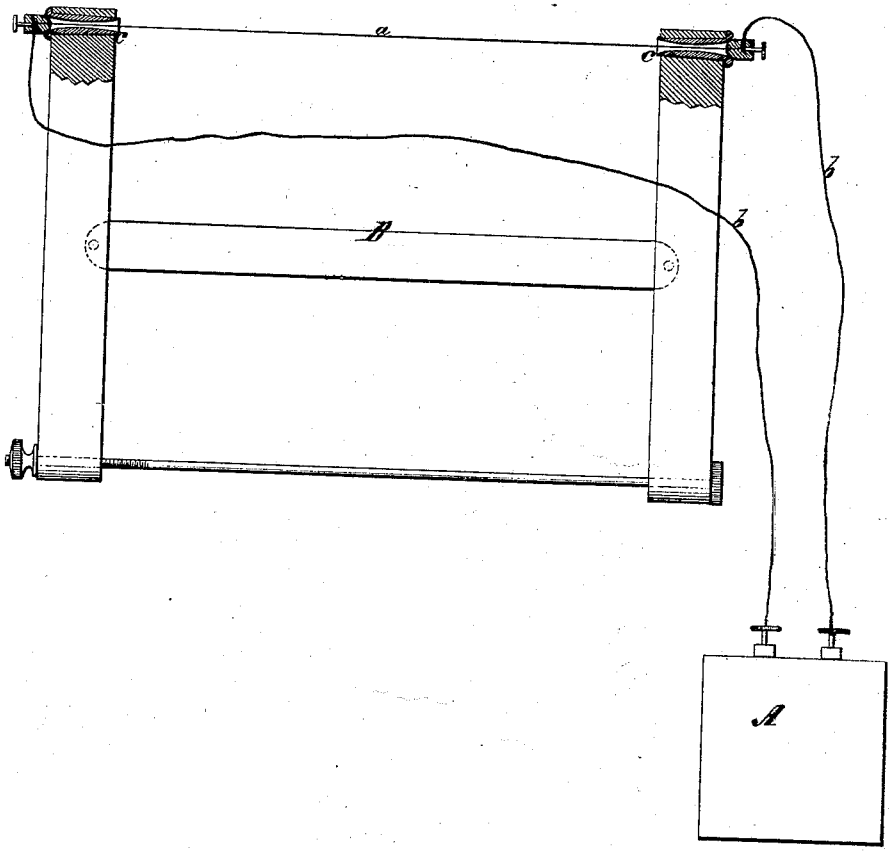
H. STEVENS.

Apparatus for Cutting Glue.

No. 168,801. Patented Oct. 11, 1875.



Witnesses.
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UNITED STATES PATENT OFFICE

HENNELL STEVENS, OF BRAZORIA, TEXAS.

IMPROVEMENT IN APPARATUS FOR CUTTING GLUE.

Specification forming part of Letters Patent No. **168,801**, dated October 11, 1875; application filed May 15, 1875.

To all whom it may concern:

Be it known that I, HENNELL STEVENS, of Brazoria, county of Brazoria and State of Texas, have invented an Improvement in Slicing and Cutting Glue; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which is shown a reciprocating frame, B, which carries a glue-cutting wire or wires, *a*, connected to a magnetic battery, A, by covered wires *b b*, and provided with glass insulators *c c* at the point where the wires pass through the frame B. This drawing illustrates about the relative sizes of the wires *a* and *b*.

The nature of my invention consists in wires, heated by electric or galvanic currents, for cutting or slicing glue; said wires being applicable to any glue slicing or cutting machine in use, and effectually overcoming the difficulties heretofore experienced in cutting glue.

In the drawing, I have shown a galvanic battery, A, and an apparatus, B, adapted for slicing or cutting glue. The parts A and B may be constructed and combined in any other proper manner than that shown, but this is a practical plan and sufficiently illustrates my invention.

In preparing glue for drying, the gelatinous solution, after being boiled down to such a consistency that it will set on cooling, is poured into rectangular boxes and allowed to become solid. It is then removed from these boxes and cut into thin sheets by means of the fine wires *a*, stretched very tightly in a frame and actuated by suitable machinery, which reciprocates the wires and causes them to pass through the glue. The wires, by being heated by the galvanic battery A, will glide through the glue with the greatest ease and rapidity, whereas, heretofore, when the wires have not been heated, the resistance and tenacity of the glue have been so great that considerable power was required, and the mass of glue, in order to save the wires from being broken and to insure a clean cut, had to be cut into narrow blocks.

In practice, the wires of any machine in use may be heated, say, to about 212°, by means of an electric current, generated by a battery of sufficient power.

The same invention may be applied to machines for cutting soap and similar tenacious articles, and by its use the operation will be performed more rapidly and the necessity for using powerful machinery and steam-power will be avoided.

In most of the glue-cutting machines, the block of glue or size is placed in a frame and raised by ratchets, as the cutting-wires reciprocate backward and forward, and it will be understood that I make no material change in the glue-cutting or other machines which cut substances with wires, except providing the insulators at the points where they pass through the frame, and attaching a battery of sufficient power for heating the wires to a temperature of about 212°, in which state they will glide through the glue with scarcely any resistance.

I have shown a frame with a single wire, to be used by hand, but any number of wires may be combined and actuated, either by hand or steam-power.

Either brass or platinum wires may be used, and any machine now in use can be fitted with my improvement at a trifling expense.

I am aware that it has been proposed to burn logs in two by means of electrically heated wires; but I am not aware that a fine wire, applied in a glue-cutting frame, and connected with a galvanic battery, has ever been devised for the purpose of fusing the glue at the lines of separation for the purpose of avoiding the difficulty experienced from the sticking of the glue to the wire. I do not claim electrically-heated wires as a new invention, disconnected from the glue or soap cutting frame.

What I claim as my invention is—

The combination of a glue-cutting frame, having cutting-wires applied across it, conducting-wires, and a galvanic battery, substantially as herein described.

HENNELL STEVENS.

Witnesses:

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