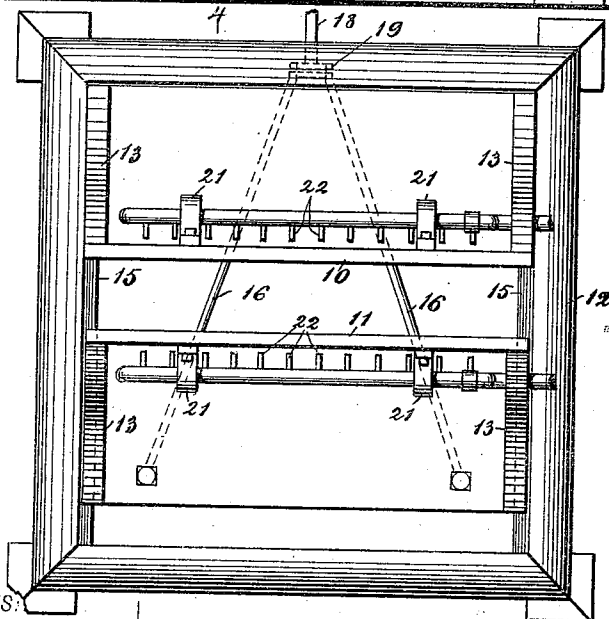
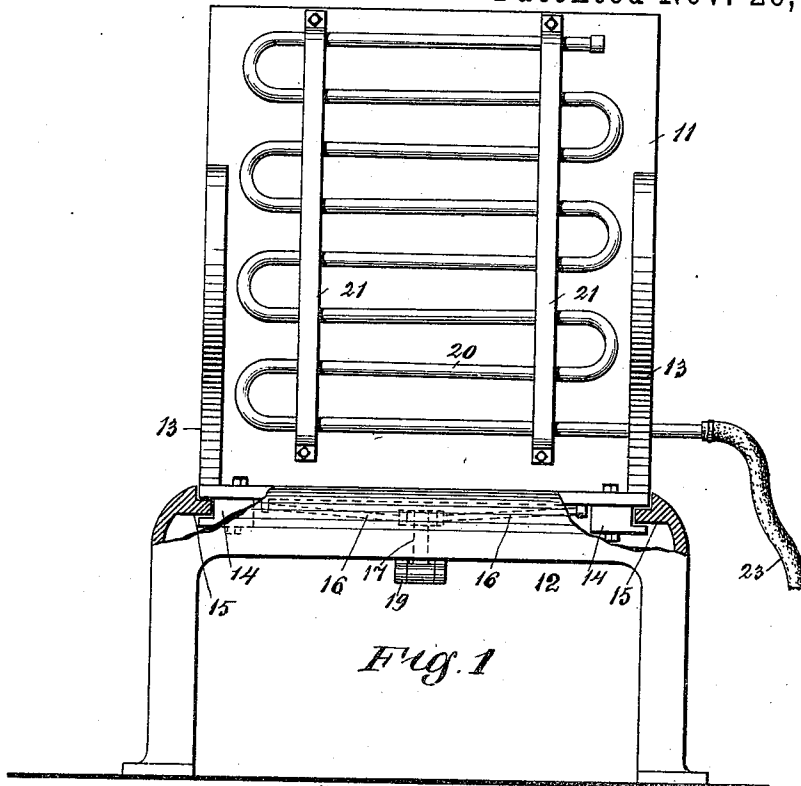


(No Model.)

2 Sheets—Sheet 1.

W. F. HUTCHINSON.  
MACHINE FOR EVENING AND CHARRING MATCH SPLINTS.  
No. 550,271. Patented Nov. 26, 1895.



WITNESSES:

J. A. Bergstrom  
John R. Keene.

4

Fig. 2

INVENTOR

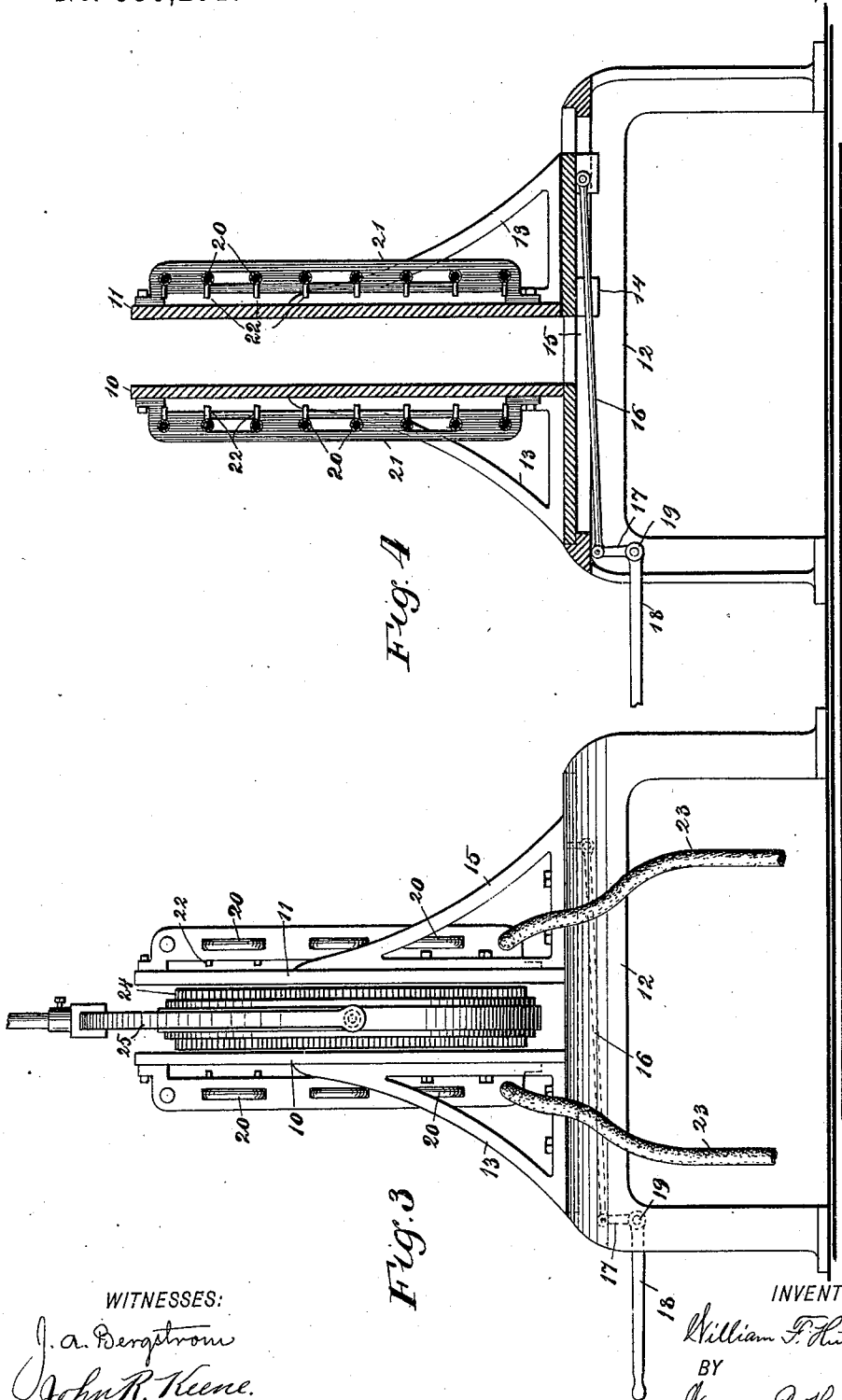
William F. Hutchinson  
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Warren B. Hutchinson  
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# UNITED STATES PATENT OFFICE.

WILLIAM F. HUTCHINSON, OF PASSAIC, NEW JERSEY, ASSIGNOR TO THE  
CONTINENTAL MATCH COMPANY, OF NEW JERSEY.

## MACHINE FOR EVENING AND CHARRING MATCH-SPLINTS.

SPECIFICATION forming part of Letters Patent No. 550,271, dated November 26, 1895.

Application filed January 19, 1895. Serial No. 535,461. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. HUTCHINSON, of Passaic, in the county of Passaic and State of New Jersey, have invented a new and  
5 Improved Machine for Evening and Charring Match-Splints, of which the following is a full, clear, and exact description.

In the manufacture of matches it is customary to char slightly the ends of the splints  
10 which are to receive the phosphorous composition in order that the paraffine, in which the splints are dipped, may readily enter the splints. It is also a practice in the manufacture of matches to assemble the splints in  
15 coils—that is, to coil them up in a retaining-belt, with their ends protruding from the belt—in order that they may be easily dipped in paraffine and in the phosphorous compound.

The object of my invention is to produce a  
20 very simple machine which is adapted to simultaneously char the ends of splints when arranged in a coil, as above specified; also to produce a machine which, when operated to char the splints, also evens the ends of the splints,  
25 so that they may be evenly dipped in both the paraffine and phosphorous mixtures, and, further, to produce a machine which is adapted to do the work very rapidly and is not likely to get out of order.

30 To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying  
35 drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken rear elevation of my improved machine. Fig. 2 is a plan view thereof.  
40 Fig. 3 is a side elevation of the machine, showing a coil of match-splints arranged between the abutment-plates of the machine; and Fig. 4 is a vertical cross-section of the machine.

The machine has two oppositely-arranged  
45 abutment-plates 10 and 11, preferably of steel, although they may be of any metal capable of withstanding heat, and these plates are large enough to completely cover an ordinary coil of match-splints, and they are movable back  
50 and forth in relation to each other. As shown, the plate 10 is rigid and the plate 11 is mov-

able, and both plates are mounted vertically on a suitable supporting-frame 12, which may be of any suitable design. The plates are each provided with suitable end braces 13, but  
55 may be braced in any convenient manner, and the movable plate 11 is provided with slide-blocks 14 (see Fig. 1) which slide on the rails 15, formed on opposite sides of the frame 12. Any suitable device may be used for moving  
60 the plates back and forth in relation to each other, a convenient device being illustrated which comprises connecting-rods 16, pivoted to the base of the plate 11, and an angle-lever 18, the arm 17 of which is pivotally connected  
65 to the rods 16, while the lever is fulcrumed at its elbow, as shown at 19, and projects forward from the machine. By raising the lever 18 the rods 16 are pushed back so as to move back  
70 the plate 11, while by depressing the lever the rods are pulled forward, and a similar movement imparted to the plate 11.

The plates 10 and 11 are heated hot by means of gas-pipes 20, which are arranged in coils on the backs of the plates, being held in  
75 suitable holders 21, which are fastened to the plates 10 and 11, and the gas-pipes are provided with numerous jet-pipes 22, which deliver upon the plates 10 and 11, so that when the gas is turned on and lighted at the jets the  
80 backs of the plates will be covered with the gas-flame and the plates will be kept very hot. The coils 20 are supplied through flexible pipes 23, which permit the necessary movement of the plate 11.  
85

The match-splints 24 to be operated on come in the form shown in Fig. 3, where they are coiled up in a belt 25 with their ends protruding from the edges of the belt, and owing to the manner in which the splints are assembled, the ends project unevenly. When the  
90 splints are to be operated on, the coil is arranged edgewise between the opposite abutment-plates 10 and 11, as specified, and the lever 18 is moved so as to force the plate 11  
95 toward the plate 10, and thus the splints are squeezed endwise between the two plates, and they are consequently all moved more or less so that they are perfectly even after the pressure of the plates upon them is removed, and  
100 when the plates are applied the ends of the splints are charred between the hot plates and

thus the evening and charring is accomplished quickly and by a single operation.

It will of course be understood that either or both plates can be moved without affecting the principle of the invention, and that many devices may be employed for reciprocating or moving the plates without departing from the principle of my invention. For this reason I do not limit myself to any precise means of moving the plates, neither do I limit myself to the means shown for heating them, as I claim, broadly, the use of moving hot abutment-plates for simultaneously charring and evening the match-splints.

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

1. A machine of the kind described, com-

prising oppositely arranged and substantially parallel vertical abutment plates, movable back and forth in relation to each other, and supported at one edge only so as to leave a clear passage between them, and means for heating the backs of the abutment plates, substantially as described.

2. A machine of the kind described, comprising oppositely arranged and substantially parallel vertical abutment plates, supported at their lower edges, one being rigid and the other movable back and forth in relation to the rigid plate, and means for heating the backs of the plates, substantially as described.

WILLIAM F. HUTCHINSON.

Witnesses:

WALLACE A. DOWNS,  
C. SEDGWICK.