(No Model.)

## G. W. GATES.

MATCH FRAME.

No. 383,721.

Patented May 29, 1888.

Fig.t

Witnesses; Cas Garford. George C. Cook.

Inverstor. George W. Gates. By Bannings Banning. Attigs.

PETERS, Photo-Lithographer, Washington, D. C.

# UNITED STATES PATENT OFFICE

### GEORGE W. GATES, OF OSHKOSH, WISCONSIN.

#### MATCH-FRAME.

#### SPECIFICATION forming part of Letters Patent No. 383,721, dated May 29, 1888.

Application filed February 17, 1887. Serial No. 227,868. (No model.)

To all whom it may concern: Be it known that I, GEORGE W. GATES, a citizen of the United States, residing at Oshkosh, Wisconsin, have invented a new and use-5 ful Improvement in Match Presses or Frames,

of which the following is a specification.

The object of my invention is to make a press or frame to receive and retain the matchsplints while they are being dipped or having

- to the chemical preparation supplied to them; and my invention consists in the features and details of construction hereinafter described and claimed.
- In the drawings, Figure 1 is a plan view of 15 a portion of my frame or press. Fig. 2 is an end elevation of a portion of the same, taken in the line 2 of Fig. 1, with a number of splints in place. Fig. 3 is an end view of a portion of the frame or press, taken in the line 3 of
- 20 Fig. 1, showing the material between the slats of the frame for holding them the proper distance apart.

In the drawings, A represents the slats out of which my frame or press is composed, B the

25 match-splints, and C the spaces in which the splints are inserted.

In making my improved press or frame for holding the splints while they are dipped in the chemical preparation necessary in their

- 30 manufacture,  $\hat{\mathbf{I}}$  employ a series of slats, which may be arranged either in a press or frame, as shown in Fig. 1, of any desired length and width, and held together by bolts or other suitable fastening devices, or which may be
- 35 arranged on an endless belt or other flexible fastening which will permit the slats to be advanced in regular order and at a graduated speed while receiving the match-splints from the cutting instrument and while they are be-
- 40 ing dipped in the proper chemical preparation. I have shown these slats arranged in a frame or press; but as it is obvious that they may be arranged, as I have above said, on an endless belt or flexible means of connection, I
- 45 do not wish to limit myself to either one or the other, particularly as my improvement relates to other features than the arrangement in a press or on an endless belt. The slats which I employ, as above said, are each made with

50 a convex and concave surface on their respective sides, so that when they are arranged to-

gether in their proper position the spaces between the slats will be curved, as will be seen by reference to Figs. 2 and 3. After the slats have been made with their sides convex and 55 concave, as above explained, they should be mounted in a frame or on an endless belt, with just enough space between them to permit of the match-splint being thrust or forced between them, with sufficient friction caused by 60 the curved shape of the space to retain them securely in place while the chemical preparation is being applied to their ends. This slight bending of the match splint or rubbing of its sides against the convex and concave 65 surfaces of the slats, so that it will touch or be held at three points, will be understood by an examination of Fig. 2. Of course it will be understood that my

match-holding frame or press is to be used in 70 connection with any of the ordinary and wellknown match-cutting machines now in common use. The match splints will be forced into the spaces adapted to receive them as they pass from the splint cutting instrument. 75 As these machines and as other match-holding presses or frames are in common use and are well known, it is unnecessary to further describe the arrangement, location, and operation of the parts with reference to the other 80 parts of the machine.

As above said, the distinguishing feature of my match frame or press lies in the fact that the spaces into which the match-splints are thrust or forced are curved, owing to the shape 85 of the slats, and as to other features and details of construction, I permit as much latitude as may be desired; but when I use the term " curved " as descriptive of the spaces between the slats I do not mean to confine myself to a 90 technical curve, but any space curved or an-gular which will bend the match splint or bring it into frictional contact with the slats at at least three points.

It is not my intention to claim in this appli- 95 cation the subject-matter of the invention described and claimed in my application filed September 1, 1887, No. 248,501. Although I consider a frame for holding

match-splints which has curved grooves in the 100 sides of its slats to be within my generic claims herein, still, for the purpose of further pro-

tection, I intend to make this construction the subject of another or divisional application. What I regard as new, and desire to secure by Letters Patent, is— In a match-splint-holding press or frame, the combination of a number of slats concave on the one side and convex on the other, held 5

permanently together with curved spaces be-tween them, into which the splints are thrust and held, substantially as described. GEO. W. GATES.

Witnesses:

THOMAS A. BANNING, FRANK L. DOUGLAS.