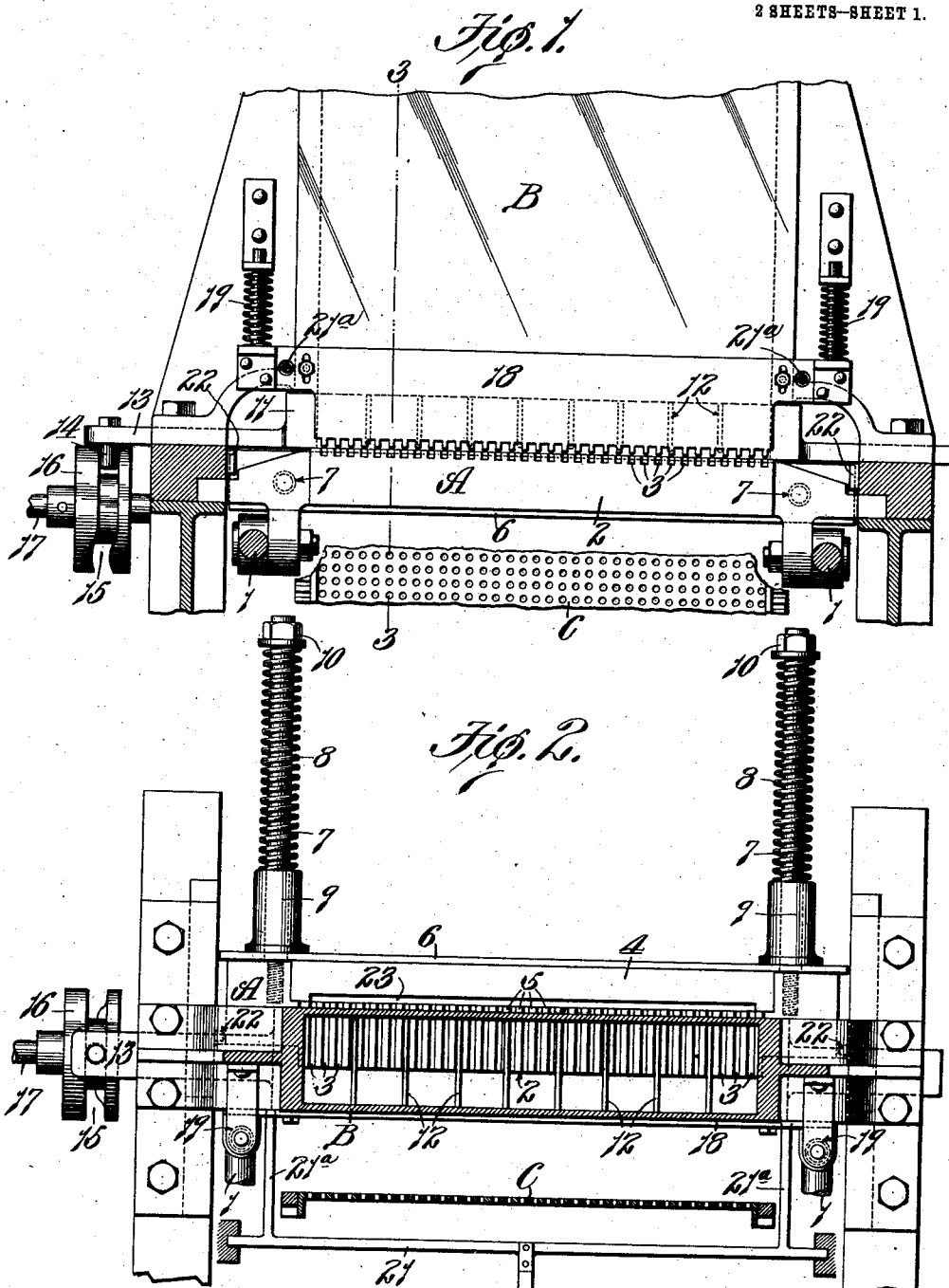


B. G. VAUGHAN.
SETTING HEAD FOR MATCH MAKING MACHINES.
APPLICATION FILED SEPT. 12, 1910.

1,010,826.

Patented Dec. 5, 1911.

2 SHEETS-SHEET 1.



Witnesses:
Geo. R. Adams
Wells L. Church

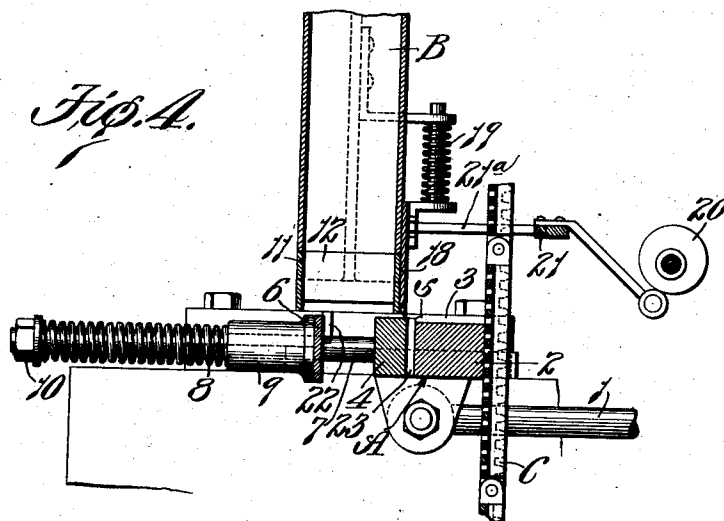
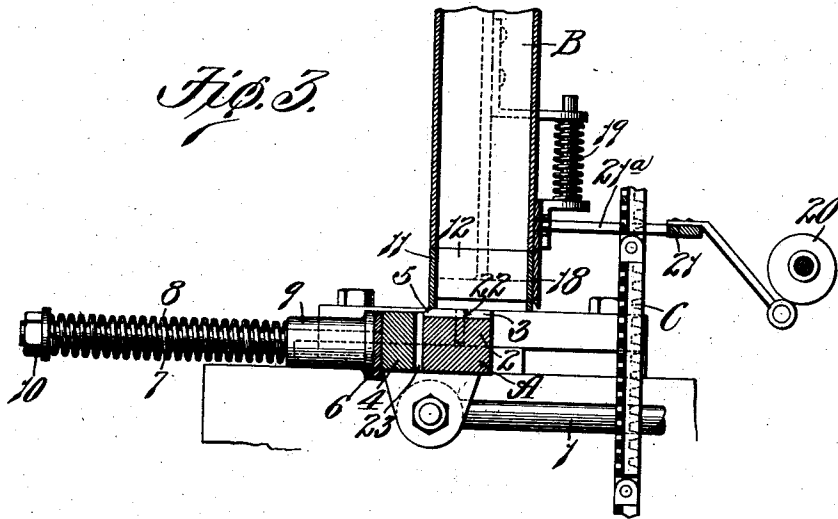
Inventor:
Bernard G. Vaughan
By Paul R. Kewell, Atty.

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 Geo. R. Lidsou
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UNITED STATES PATENT OFFICE.

BERNARD G. VAUGHAN, OF JOLIET, ILLINOIS, ASSIGNOR TO NATIONAL MATCH COMPANY, OF JOLIET, ILLINOIS, A CORPORATION OF ILLINOIS.

SETTING-HEAD FOR MATCH-MAKING MACHINES.

1,010,826.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed September 12, 1910. Serial No. 581,539.

To all whom it may concern:

Be it known that I, BERNARD G. VAUGHAN, a citizen of the United States, residing at Joliet, Will county, Illinois, have invented
5 a certain new and useful Improvement in Setting-Heads for Match-Making Machines, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to
10 make and use the same.

This invention relates to match-making machines, and particularly to the setting heads used in such machines for inserting the match-splints in the carrier which con-
15 veys the splint to the dipping tank.

The object of this invention is to provide a setting head having match-splint-receiving grooves formed in the top face thereof, and a flat surface at the rear of said grooves on
20 which the match-splints pack closely together when the setting head moves into delivering position, the rear ends of the ribs between the splint-receiving grooves in said head being so designed that the splints will
25 be guided into said grooves when the head moves into its receiving position.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a front eleva-
30 tional view of a portion of a match-making machine provided with a setting head constructed in accordance with my invention; Fig. 2 is a top plan view of the mechanism shown in Fig. 1; Fig. 3 is a vertical
35 sectional view taken on approximately the line 3—3 of Fig. 1, showing the setting head arranged in receiving position; and Fig. 4 is a view similar to Fig. 3 but with the set-
40 ting head arranged in delivering position.

Referring to the drawings which illustrate the preferred form of my invention, A designates the setting head of a match-making machine which receives match-splints from the hopper B and inserts said
45 splints in the carrier C which conveys the splints to the dipping tank, not shown. Said setting head consists of a horizontally disposed member which is reciprocated back and forth under the hopper by means of
50 links 1 or other suitable devices. The top face of the front portion 2 of the head A is provided with parallel match-splint-receiving grooves 3 which extend transversely of the head, the depth of said grooves being a
55 trifle greater than the thickness of the

match-splints, and the length of said grooves being a trifle less than the length of the match-splints. The top face of the rear portion 4 of the head is flat so that it will form a smooth support for the match-splints when
60 the setting head is in its delivering position, and the ribs 5, which form the grooves 3 in said head, project a slight distance above the top face of said rear portion 4, the rear ends of said ribs being beveled downwardly, as
65 shown in Figs. 3 and 4, for a purpose hereinafter described. A follower 6 which is arranged at the rear of the head is mounted on guide-rods 7, and coiled expansion
70 springs 8 are arranged on said guide-rods between bosses 9 on the follower and stops 10 on the guide-rods so as to normally hold the follower in engagement with the setting
75 head, the upper edge of said follower being flat and flush with the top face of the rear portion 4 of the setting head. A feeder 11 is arranged between the setting head and the
80 hopper B so as to agitate the match-splints and feed them to the setting head, the feeder herein shown consisting of a comparatively shallow hopper provided with vertically
85 disposed partitions 12 and having a laterally projecting arm 13 at one end provided with a roll 14 which projects into a double cam groove 15 formed in a cam block 16 that is
90 secured to a driven shaft 17, said cam groove being so formed that the feeder 11 is moved transversely of the setting head on the return stroke or when said setting head is arranged in receiving position, as shown in
95 Fig. 3. The particular construction of the feeder, the hopper and the match-splint-carrier is immaterial, however, so far as my present invention is concerned, and therefore I do not wish it to be understood that
the setting head herein shown is limited to use with any particular design of match-making machine.

The machine herein shown is provided with a comb 18 arranged on the front wall
100 of the hopper for cleaning out the grooves 3 in the setting head or removing match-splints that have become lodged therein, said comb being depressed when the setting head moves rearwardly by means of coiled
105 expansion springs 19 and elevated before the setting head starts to move forwardly by means of a cam 20 that actuates a bar 21 provided with arms 21^a which engage said comb.

When the setting head moves forwardly 110

into delivering position, as shown in Fig. 4, the follower 6 comes in contact with stationary stops 22 which arrest the forward movement of the follower before the setting head has completed its forward stroke, thereby causing a space to be formed between the follower and the setting head through which the short match-splints, dust and splinters can escape. The transverse movement of the feeder 11 agitates the splints and feeds them downwardly onto the upper edge of the follower and the rear portion 4 of the setting head which alines with the follower, and as the top faces of said members are smooth and flat the match-splints will pack closely together on same. When the setting head moves rearwardly the inclined ends 5 of the ribs between the grooves 3 will lift the match-splints which are not in alinement with said grooves and thus guide the intermediate splints into the grooves, the head coming to rest when it reaches approximately the position shown in Fig. 3 so that a space is formed between the front end of same and the front wall of the feeder 11 through which the short match-splints and dust can escape.

The setting head proper can either be formed from a single casting or from two separate pieces of metal connected together, the latter construction being preferable because it enables a slot or channel 23 to be formed in the head at the inner ends of the grooves 3 through which dust and small splinters can escape.

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

1. A setting head for match-making machines provided with parallel grooves for receiving match-splints and having a smooth, flat metal splint-supporting surface arranged at the rear of said grooves above the bottom of the grooves, the ribs between said grooves projecting above said flat surface and having their rear ends beveled, and a member which coöperates with said smooth, flat surface for supporting the match-splints when the head is in a certain position.

2. A setting head for match-making machines having a flat portion on which the match-splints rest when the head is in a certain position, a match splint-supporting member coöperating with said flat portion

and parallel ribs arranged in front of said flat portion and projecting above the top face of same and having their rear ends beveled so as to guide the match-splints into the spaces between said ribs when the head moves into a certain position, the bottom surface of the spaces between said ribs being lower than the flat portion on which the splints rest.

3. A setting head for match-making machines provided with transversely arranged parallel ribs whose rear ends are beveled, a flat surface at the rear of said ribs arranged above the bottom of the spaces between the ribs, a follower whose upper edge is flush with said flat surface, and means for causing said follower to move toward and away from said head so as to form a space between said parts through which short splints and dust can escape.

4. A setting head for match-making machines having a slot or channel formed therein which extends transversely across the head, a flat match splint supporting surface at the rear of said channel, and parallel ribs arranged in front of said channel and projecting above the flat surface at the rear of the channel, the bottom of the spaces between said ribs being lower than said match-splint supporting surface.

5. In a match-making machine, a container for holding a mass of match-splints, a match-splint-carrier, a reciprocating setting head arranged under said container and having a row of parallel ribs on the top face thereof and a flat surface at the rear of said ribs, which lies below the upper edges of said ribs but slightly above the bottom of the grooves or slots between the ribs, the rear ends of said ribs being inclined downwardly, a follower coöperating with said head, and means for arresting the movement of said follower before the head completes its stroke when it moves into delivering position, so as to form a space between the follower and head through which short match-splints and dust can escape.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 8th day of September 1910.

BERNARD G. VAUGHAN.

Witnesses:

L. A. SHERWOOD,
H. LESER.