

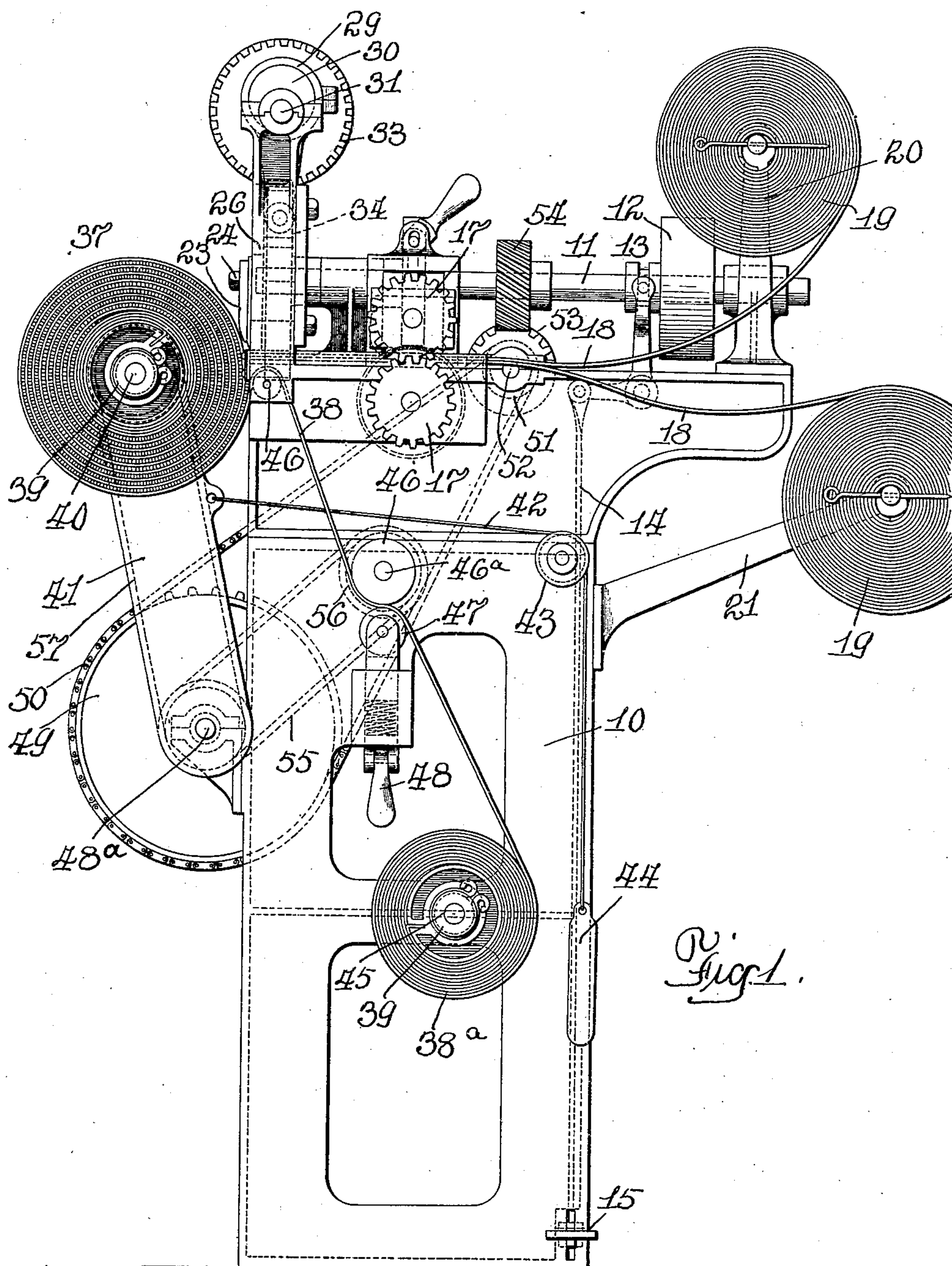
W. H. PARKER.
MATCH MACHINE.

APPLICATION FILED SEPT. 24, 1907. RENEWED OCT. 13, 1908.

921,731.

Patented May 18, 1909.

2 SHEETS—SHEET 1.



WITNESSES:

Frank L. Stubbs.

Ralph L. Lucey.

INVENTOR.

William H. Parker.

BY

W. B. Hutchinson.

ATTORNEY.

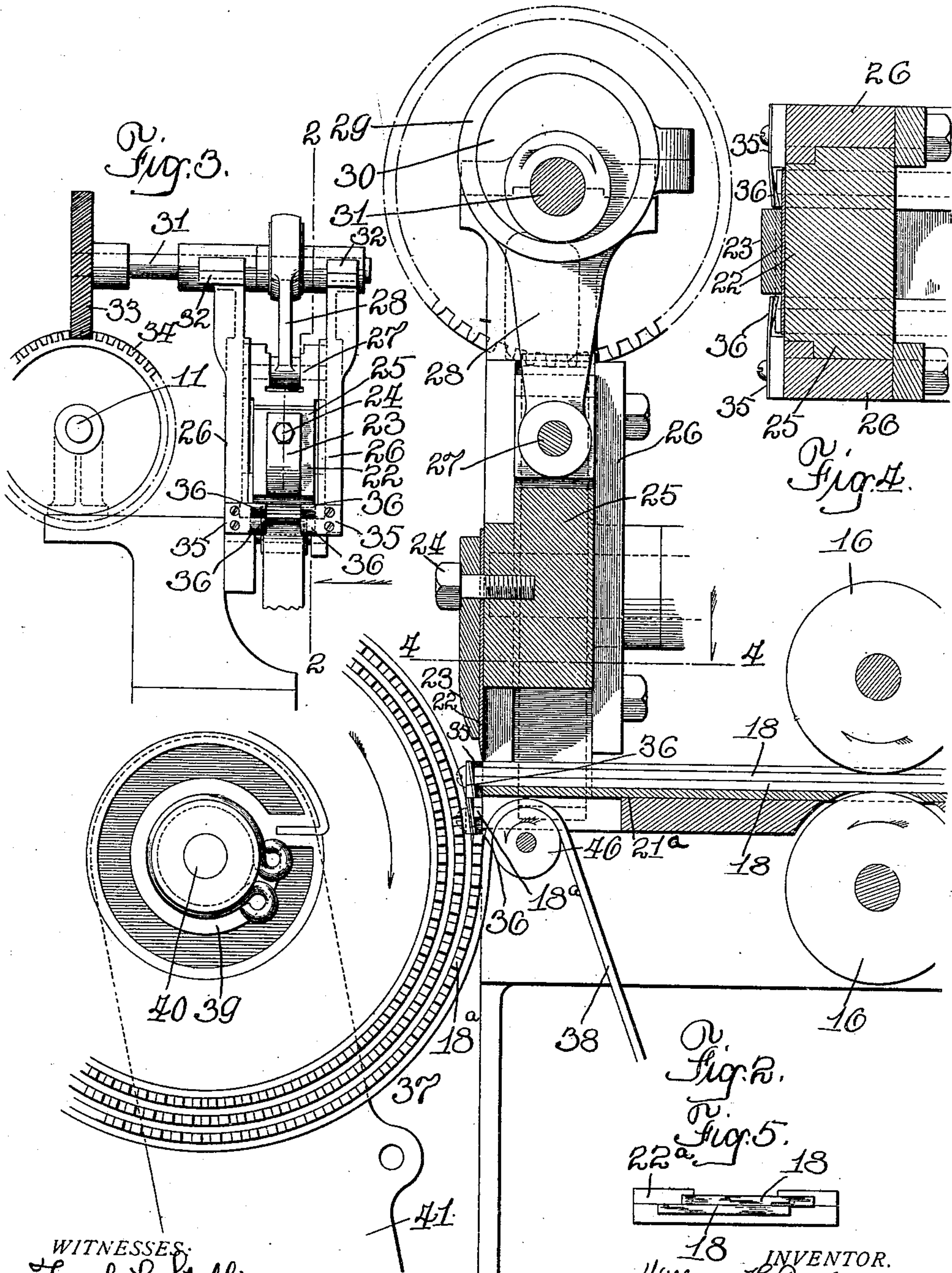
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2 SHEETS—SHEET 2.



WITNESSES:
Frank L. Stubbs

Ralph Lancaster.

INVENTOR.
William H. Parker.
BY
W. D. Hutchinson,
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM H. PARKER, OF PASSAIC, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
A. A. MAXSFIELD, OF BATESVILLE, ARKANSAS.

MATCH-MACHINE.

No. 921,731.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed September 24, 1907, Serial No. 394,314. Renewed October 13, 1908. Serial No. 457,529.

To all whom it may concern:

Be it known that I, WILLIAM H. PARKER, of the city of Passaic, county of Passaic, and State of New Jersey, have invented a new and useful Improvement in Match-Machines, of which the following is a full, clear, and exact description.

My invention relates to improvements in match machines, and especially to improvements in that type of machine in which the match splints are cut from strips of veneer the width of the strips corresponding to the length of the match, and in which plural strips of veneer are cut and arranged out of alinement as they lie together, so that the alternate ends of adjacent splints shall protrude from their carrier, the splints being also cut in such a way that each splint serves to space the adjacent splint so that the assembled splints can be dipped without making bad heads.

In machines of this type it has been found difficult to control the splints properly, and especially to guide them from the cutter into the carrier, which in this type of machine is generally a coil, that is a web or belt is coiled up with the splints so as to guide them preparatory to dipping. Generally in such machines a chute has been arranged between the knife and the coil, as the splints are very apt to clog in the chute, especially as more or less dust and slivers will certainly collect in the chute.

My invention lies chiefly in the cutting mechanism, and I arrange to cut practically right into the coil, and arrange, instead of a chute, a holder which has barbs or detents thereon, which effectually prevent the splints from being pulled back with the knife on the return stroke of the latter, and which makes it certain that the splints will be packed snugly into the coil.

With these ends in view, my invention consists of improvements in splint cutting and holding mechanism, which will be hereinafter described and claimed.

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

Figure 1 is a side elevation of the machine embodying my invention. Fig. 2 is an enlarged detail vertical section on the line 2—2 of Fig. 3. Fig. 3 is a broken front elevation of the cutting mechanism and connected

parts. Fig. 4 is a sectional plan on the line 4—4 of Fig. 2, and Fig. 5 is a detail view showing the arrangement of the stock for cutting and the guides for the stock.

The machine has a suitable frame 10, on the upper part of which is arranged the driving shaft 11, which can be operated in any usual way, but for convenience is shown provided with a pulley 12 controlled by the clutch 13, which has a connection as shown at 14 with a treadle 15 so that the machine can be conveniently stopped and started. None of this arrangement is new, and I refer to it generally only so that the operation of the machine can be understood. The machine has the usual feed rolls 16, shown best in Fig. 2, which are connected as usual by gears 17, and which carry forward the stock strips 18 which as already stated are of veneer, and are drawn from the rolls 19, although strips may be used instead of rolls if preferred. The rolls 19 of veneer are provided with suitable centers and hung on brackets 20 and 21, so that the strips can be simultaneously fed forward, lying one upon the other, but out of vertical alinement, the stock being held in this position by a suitable guide 22 shown in Fig. 5. The stock is fed forward over a table 21^a (see Fig. 2) and is cut off two splints at a time by the reciprocating knife 22^a which shears across the table end, thus cutting the stock into splints 18^a. The knife 22^a has a plunger 23 attached thereto and terminating at its lower end in a shoulder which serves to push the severed splints down snugly in their receiving coil, which will be hereinafter referred to. The knife and abutting shoulder can be arranged in any convenient way and operated in any preferred manner, but I prefer to attach them by a bolt 24 to a sliding head 25, which reciprocates in a vertical way 26, and is pivotally connected as shown at 27 with a link 28, this merging into an eccentric strap 29 which rides on the the eccentric 30, while the latter is turned by the shaft 31. The shaft 31 is mounted in suitable bearings 32 and is connected by gears 33 and 34 with the driving shaft 11, so that the shaft 31 turns constantly and the knife 22^a is constantly reciprocated.

The important part of the invention lies in the arrangement of the knife, the splint holder and the coil 37. The splint holder 35 is preferably of sheet metal, and is arranged in two parts directly opposite the end of the

table 21^a where the splints are cut, and each part 35 has inwardly extending barbs or detents 36 the lower parts of which project into the path of the splints, as shown clearly in Fig. 2, and these are of spring material so that the descending shoulder of the plunger 23 can carry the splints past the barbs, but when the knife returns the splints cannot rise up with the knife, although the upper set of splints will engage the upper detents or barbs as shown in Fig. 2. The coil 37 is arranged snug up to the cutting point so that no intervening chute is necessary and the only thing to separate the coil from the cutting point is the holder 35. This arrangement while extremely simple, is exceedingly important and is the result of a great deal of experimenting to find some means of getting the splints into the coil without their clogging or becoming in any way twisted or displaced. The coil 37 is precisely as usual in this type of machine. It is made up of a web or belt 38 which is coiled up with the splints 18^a, and is narrower than the splints so that their ends will protrude for dipping. The web or belt is wound on a center 39 of the usual kind, which is placed upon a shaft 40, and the same sort of a center is used to carry the coiled belt from which the belt is withdrawn to wind it up with the splints. The shaft 40 is carried on the free end of an arm 41, which is held up against the cutting part of the machine by a cable or belt 42 which runs over a suitable guide pulley 43 and is provided with a weight 44 which affords the necessary tension to the coil. The shaft 45, to which a center 39 carrying a belt 38 is attached, is located below the operating parts of the machine as shown in Fig. 1. The belt is passed forward over a guide roller 46 which is placed snug up beneath the knife 22 and opposite the lower part of the splint holder 35, and the belt also

passes between tension rollers 46^a and 47, the latter being adjustable by means of a lever 48. The shaft 48^a is driven by means of a sprocket wheel 49 and chain 50, the latter connecting with a sprocket wheel 51 and a shaft 52, which connects by gears 53 and 54 with the driving shaft 11. The shaft 48^a also has a connection by means of a sprocket wheel and chain 55 with a sprocket wheel 56 on the shaft 46^a, and it has a chain or belt connection 57 with the shaft 40, which is turned in order to wind up the belt 38.

The driving mechanism described is not very important, and can of course be changed as desired. I have described it in a general way to show an operative machine, but as previously stated the invention lies in the cutting mechanism, the splint holder, and the arrangement of the splint holder, coil, and cutting mechanism.

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

1. A match machine comprising a horizontal stock feed, a cutter shearing across the feed, and a coiling device having its axis essentially opposite the end of the horizontal stock feed and arranged to receive the splints direct from the cutter without the intervention of a chute.

2. A match machine comprising a horizontal stock feed, a knife shearing across the feed, a coiling device hung horizontally opposite the stock feed and arranged to receive the splints direct from the feed, and detents to prevent the withdrawal of splints from the coil.

WILLIAM H. PARKER.

Witnesses:

W. H. MONCRIEF,
L. F. McCONNELL.