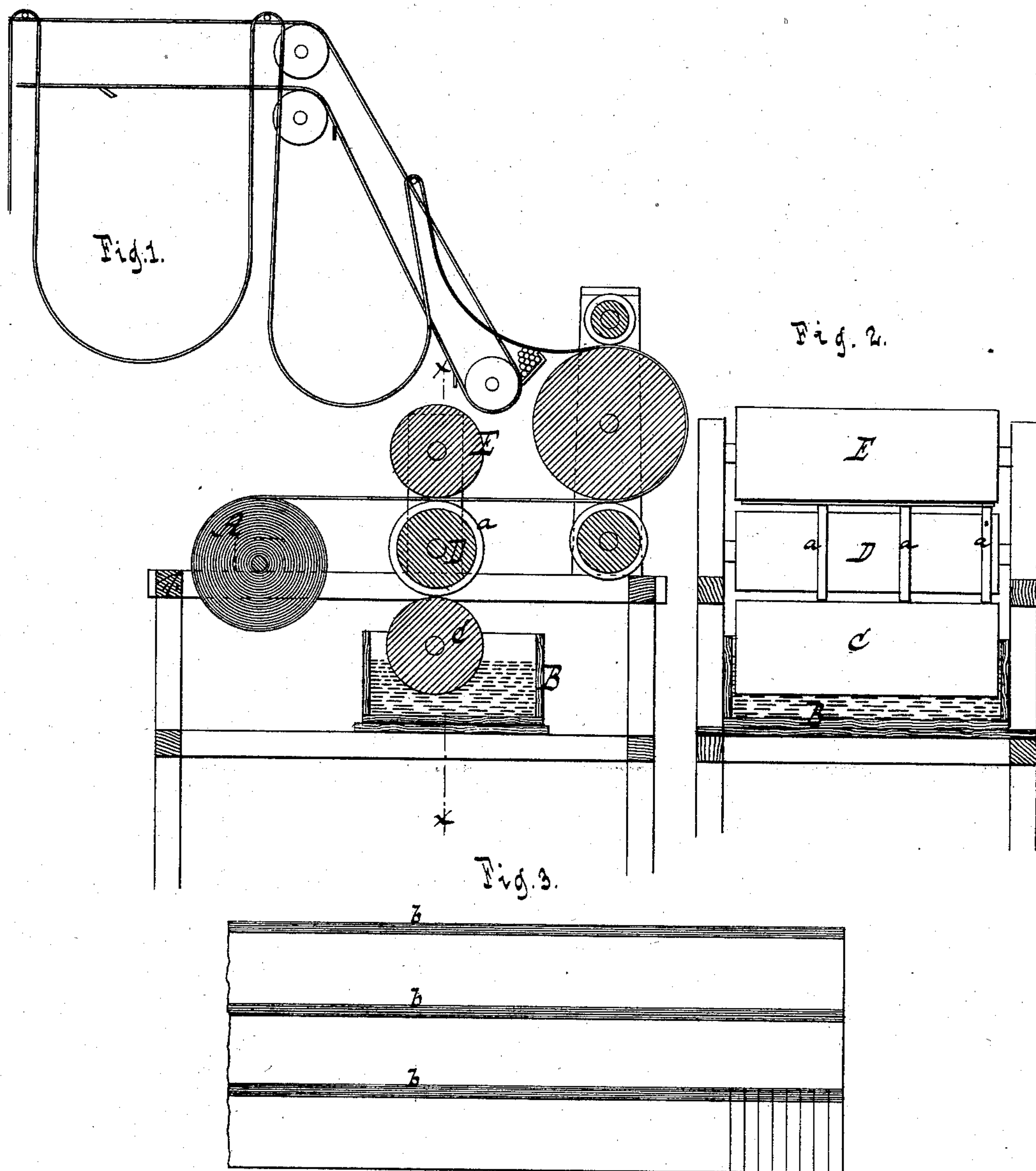


(No Model.)

G. L. JAEGER.
MANUFACTURE OF MATCHES.

No. 282,326.

Patented July 31, 1883.



WITNESSES:

Otto Aufeland
William Miller

Fig. 4.



INVENTOR

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UNITED STATES PATENT OFFICE.

GUSTAV L. JAEGER, OF NEW YORK, N. Y.

MANUFACTURE OF MATCHES.

SPECIFICATION forming part of Letters Patent No. 282,326, dated July 31, 1883.

Application filed May 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV L. JAEGER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in the Manufacture of Matches, of which the following is a specification.

This invention consists in a new process for manufacturing matches by applying to a web of paper or other suitable material a series of continuous streaks or ridges of lighting compound at suitable distances apart in the direction of the length of the web, then partially drying these streaks of lighting compound on the web, then, if necessary, cutting the web into strips corresponding in width to the length of the matches to be produced, and finally cutting these strips transversely to form the matches.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section of the apparatus which may be used in carrying out my invention. Fig. 2 is a transverse section in the plane *xx*, Fig. 1. Fig. 3 is a plan of the web after the lighting compound has been applied. Fig. 4 is a plan of a finished match.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a roll of paper, pasteboard, straw-board, veneer, or other equivalent material suitable for the manufacture of matches. From this roll the web is drawn off and drawn through an apparatus for applying on its surface ridges of a suitable lighting compound in the direction of the length of the web. In the example shown in the drawings, this apparatus consists of a trough, B, which contains the lighting compound in a melted or semi-fluid condition, a feed-roller, C, which dips into the trough, a printing-roller, D, for transferring the lighting compound from the feed-roller to the web, and a roller, E, for keeping the web in contact with the printing-roller. This printing-roller is formed with a series of circular ridges, *aa*, Fig. 2, the distances between which correspond to the length of the matches to be produced. By the action of the printing-roller, therefore, the lighting compound

is transferred to the web in continuous streaks *b b*, Fig. 3, which run in the direction of the length of the web, and the distances of which from each other correspond to the length of the matches to be produced. At the same time the web is drawn off from the roll A by the action of the printing-roller and the roller E, and after the lighting compound has been transferred to the web, as above described, the web is dried until the streaks of lighting compound on the same have become partially dry. For the purpose of drying the web an apparatus may be used such as is commonly employed for drying paper-hangings. After the lighting compound has become partially dry, the web is cut into strips, each of which has a streak of lighting compound at or near one of its edges, and finally these strips are cut transversely to form matches of the form shown in Fig. 4.

Great care must be taken in drying the web, so as to keep the lighting compound at the proper consistency for cutting, for if the lighting compound is too dry it cannot be cut without running the risk of an explosion, and if it is not dry enough the pellets on the matches will not be uniform; but if the lighting compound has been dried to the proper consistence and the strips of the web are cut up into matches, a portion of the lighting compound is drawn down over the edges of the match-sticks during the operation of cutting, and by these means the match burns readily if the lighting compound is ignited by friction.

The lighting compound which I use is such as commonly used in the manufacture of friction-matches.

Instead of cutting the web into strips after the lighting compound has been applied, the strip-cutting operation may be performed first, and then the lighting compound can be applied on one or both sides of the strips in continuous streaks near one of their edges, and after these streaks have been partially dried the strips are cut up into matches. If the web is already of the required width, no strip-cutting operation is required.

What I claim as new, and desire to secure by Letters Patent, is—

The process of manufacturing matches, which consists in applying to a web of wood, paper, or other suitable material continuous streaks or ridges of lighting compound in the direction of the length of the web, then partially
5 drying these streaks of lighting compound on the web, and then cutting the web into matches.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

GUSTAV L. JAEGER. [I. s.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.