

UNITED STATES PATENT OFFICE.

FRANKLIN R. SMITH, OF SYRACUSE, NEW YORK, ASSIGNOR TO WILLIAM DUFFUS, OF SAME PLACE.

PLAITING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 238,616, dated March 8, 1881.

Application filed October 9, 1880. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN R. SMITH, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Plaiting-Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

The nature of this invention consists, essentially, in the combination, with a sliding plaiting-grate, of a plate heated by steam and pressing on the plaited fabric pendent from the under side of the grate, thereby automatically and perfectly pressing the plaits without danger of scorching or otherwise injuring the fabric.

The invention is fully illustrated in the accompanying drawings, wherein Figure 1 is a longitudinal section of a plaiting-machine provided with my improvements, and Fig. 2 a transverse section of same.

Similar letters of reference indicate corresponding parts.

A represents a plaiting-grate arranged to slide on a suitable frame, B, and simultaneously receive through its interstices the reciprocating plaiting-knife C, which, in its passage through the grate, carries with it a portion of the fabric applied to the top of the grate, said portion of fabric being left pendent from the under side of the grate after the withdrawal of the knife, and subsequently drawn over the bed of the machine by the sliding forward of the grate, thus completing the plaits. These plaits have to be pressed while connected to the grate in order to keep them in shape. This is usually accomplished by inverting the grate, with the fabric connected thereto, and applying a hot sad-iron to the plaits at the back of the grate. This operation being slow and tedious, an attempt has been made to press the plaits while passing over the bed of the machine by substituting for said bed a plate bearing against the under side of the grate and heated by a flame arranged beneath the said plate. This arrangement, however, has proved to be, not only unpleasant to the operator, on account

of the smoke from the flame, but also dangerous, inasmuch as it was liable to scorch the fabric and also set fire to surrounding objects.

It is to obviate the aforesaid difficulties and dangers which my invention has for its object; and to that end it consists in arranging underneath the plaiting-grate a steam-chamber, D, in such a manner as to bring its top plate, D', to bear on the under side of the grate back of the plaiting-knife and serve as the bed over which the grate slides during the process of forming the plaits, said chamber being provided with a slot, through which the plaiting-knife, with the fabric, enters the chamber, and, by exposure to the steam, moistens the fabric preparatory to being pressed. The subsequent forward movement of the grate draws the plaited cloth over the steam-heated bed, and thus causes the plaits to be pressed into proper shape. The grate receives the requisite pressure upon the bed by means of rollers *r r* extended across the top of the grate and pivoted to the sides of the frame B of the machine.

The steam-chamber D may be supplied with steam from a boiler or suitable vessel heated on a stove, or by a lamp, and connected with the chamber D by a hose or pipe; or it may be partly filled with water and heated by exposing the under side of said chamber to a flame. A tube, *d*, on the side of the steam-chamber, and provided with a removable cap or stopper, admits of the introduction of the water.

I do not claim a pressing-plate heated otherwise than by steam, for the reason hereinbefore stated; but

What I do claim as my invention is—

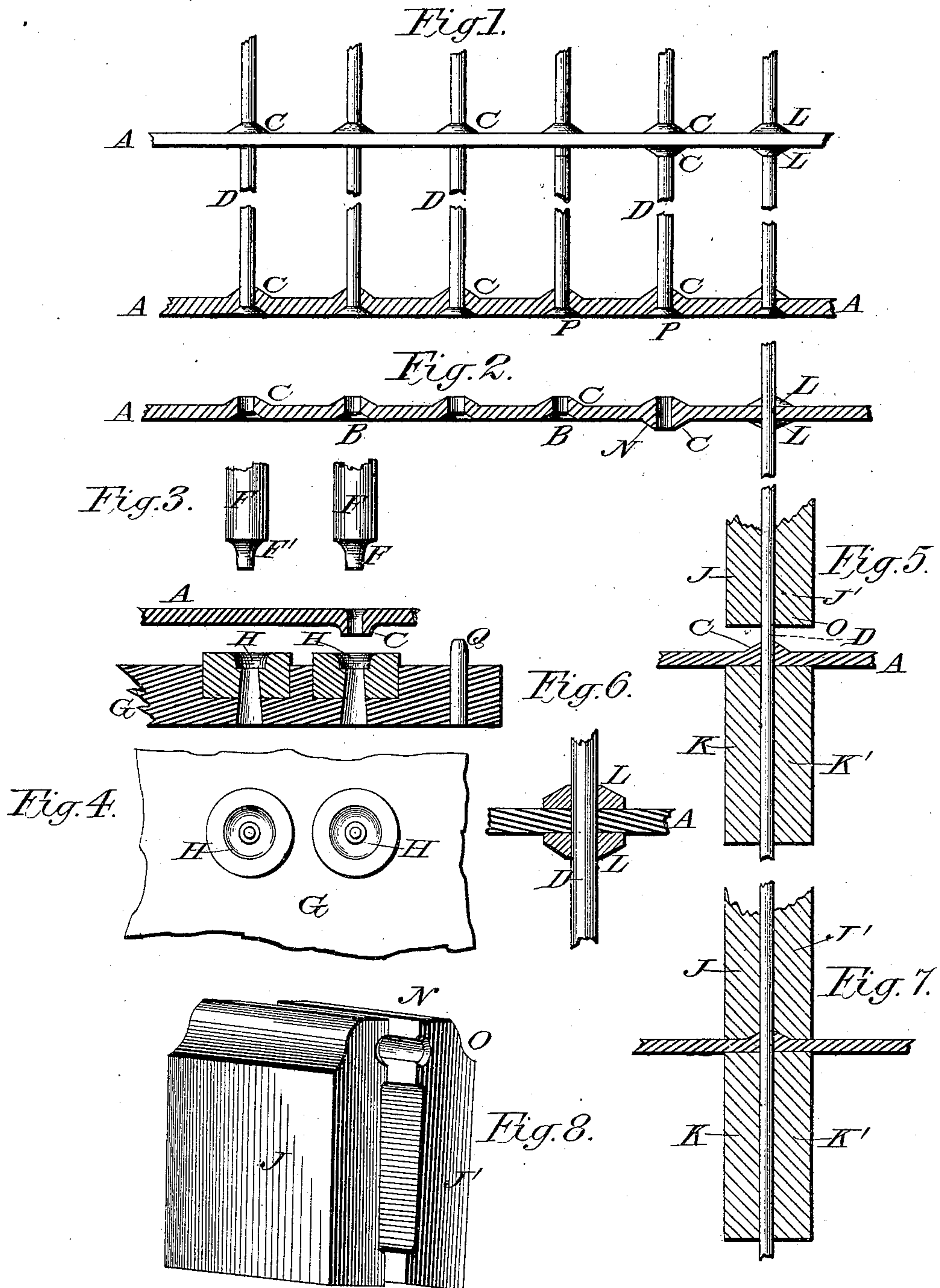
1. In a plaiting-machine, the combination of a steam-chamber arranged back of the plaiting-knife, and a plaiting-grate arranged to slide upon said steam-chamber, substantially as and for the purpose specified.

2. The combination, in a plaiting-machine, of a steam-chamber extended underneath the plaiting-grate, and arranged contiguous to the under side thereof, and provided with an en-

(No Model.)

M. J. STARK.

Fastening for Intersecting Wires of Cages.
No. 238,617. Patented March 8, 1881.



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