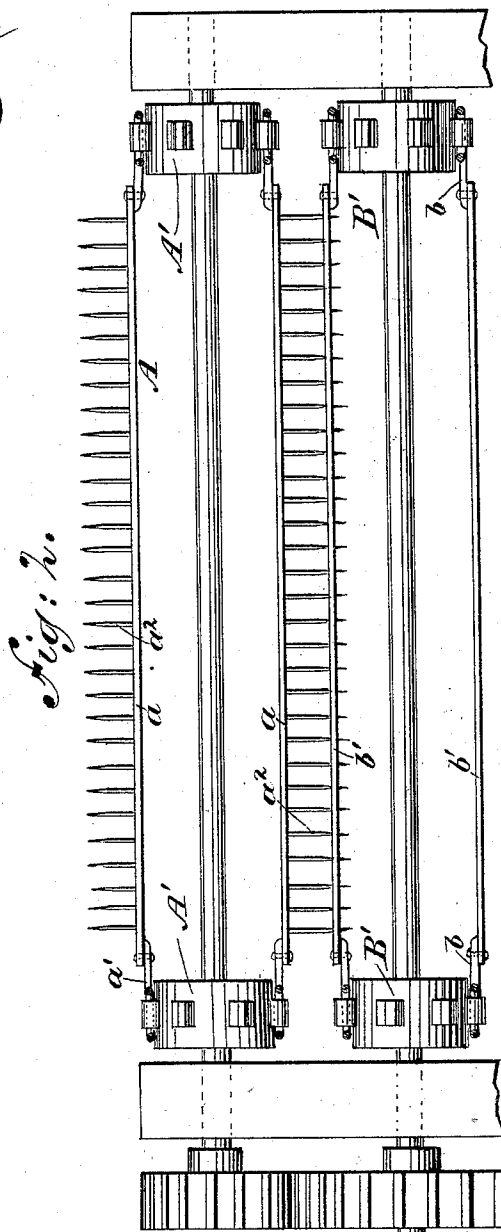
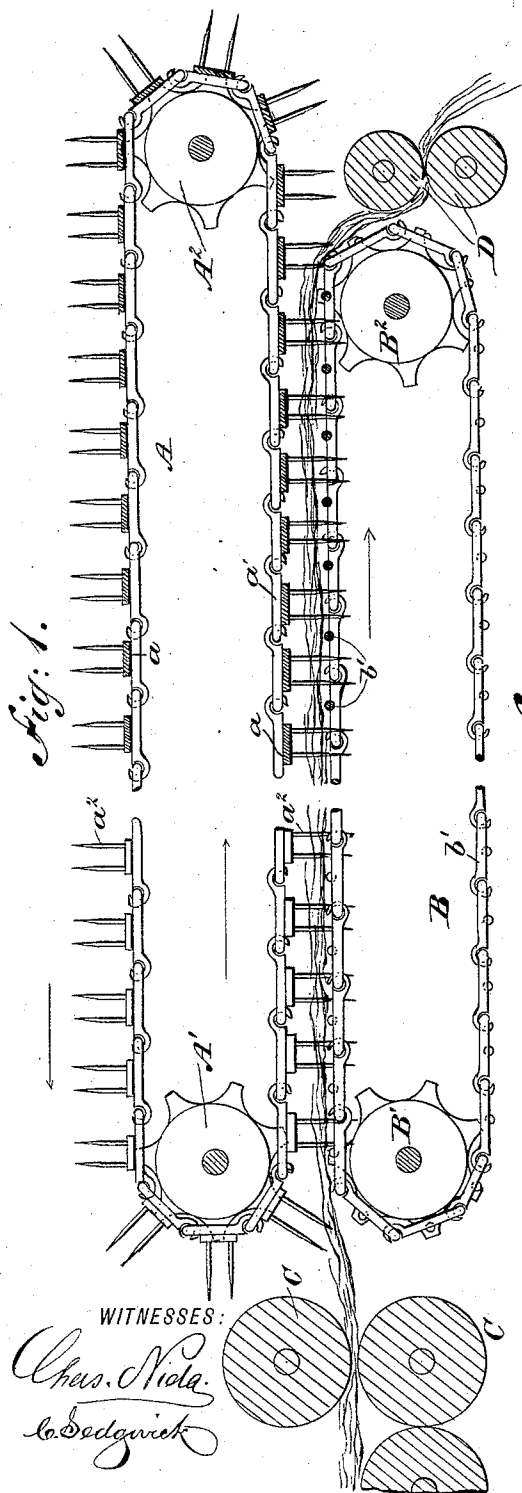


(No Model.)

J. A. MURPHY.
DRAWING FRAME.

No. 468,726.

Patented Feb. 9, 1892.



UNITED STATES PATENT OFFICE.

JUNIUS A. MURPHY, OF NEW ORLEANS, LOUISIANA.

DRAWING-FRAME.

SPECIFICATION forming part of Letters Patent No. 468,726, dated February 9, 1892.

Application filed May 14, 1891. Serial No. 392,732. (No model.)

To all whom it may concern:

Be it known that I, JUNIUS A. MURPHY, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Drawing-Frame, of which the following is a full, clear, and exact description.

The object of the invention is to provide a means for effectively and economically combing animal fibers, particularly horse-hair. Such hair has a peculiar tendency to entwine itself in and follow the combing-fingers in ordinarily-arranged drawing-frames, instead of leaving the same in obedience to the action of the drawing-rolls.

The distinguishing characteristic of the present invention is that provision is made for releasing the hair by gravitation, a clearance-space being provided for the purpose beyond the fiber-supporting apron of the drawing-frame.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a broken side elevation, partly in section, illustrating a combing-belt, the apron operating in connection therewith and the feeding and drawing rolls, the same being arranged in accordance with my invention; and Fig. 2 is a front elevation, the feeding-rolls being omitted.

The combing-belt A is composed of gill-bars *a*, supported at their ends on the traveling chains *a'*, and is mounted to travel on the chain-wheels A' A². Below the combing-belt A a supporting-apron B for the fibers is arranged, the same being composed of links *b* and cross-bars *b'*, between which cross-bars the combing fingers or teeth *a*² of the gill-bars *a* enter, said apron being driven by chain-wheels B' B².

C C indicate feed-rollers arranged at the front of the frame or point of delivery of the fibers, and D D indicate drawing-rolls, between which the fibers are drawn.

The elements enumerated—to wit, combing-belt, apron, feed-rolls, and drawing-rolls—as is well known, are common to drawing-frames generally. In the present invention, however, the apron B terminates at the forward end short of the point of forward travel of the combing-belt A, and a clearance-space

is provided in advance of the said apron and beneath the combing-belt. The drawing-rolls D are located in advance of the apron B and beneath the end of the combing-belt or otherwise so arranged as to cause the fibers to pass from the belt and apron in a downward direction to the said drawing-rolls. The arrangement is such that the fibers are not supported beyond the apron B, and the clearance-space is sufficient to permit the fibers to fall from the combing-fingers by gravitation, and I find in practice that, although such fibers as are not directed to the drawing-rolls have a persistent tendency to cling to the combing-fingers, such tendency is successfully overcome by gravitation by the provision of a proper clearance beyond the point where they are not supported by the supporting-apron. As the loose fibers are released by gravitation they are taken up with the others and drawn through the drawing-rolls. By this means animal fiber—such as horse-hair—may successfully and economically be combed and in a manner to readily permit of its being subsequently treated for curling the same.

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

1. In a drawing-frame, a combing-belt and a supporting-apron arranged beneath the same for supporting the fibers, such supporting-apron terminating short of the forward point of travel of the working portion of the combing-belt, a clearance-space being formed immediately beyond the apron and beneath the combing-belt, which will permit the clinging fibers to fall by gravitation, in combination with means for drawing the fibers downward from between the combing-belt and apron, substantially as described.

2. In a drawing-frame, the combination of a combing-belt, an apron arranged beneath the same, the said belt extending and having a forward movement beyond the apron, and drawing-rolls arranged in advance of the apron and beneath the forward end of the combing-belt, substantially as described.

JUNIUS A. MURPHY.

Witnesses:

J. L. MCAULIFFE,
C. SEDGWICK.