

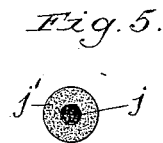
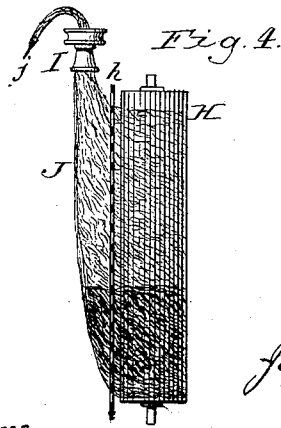
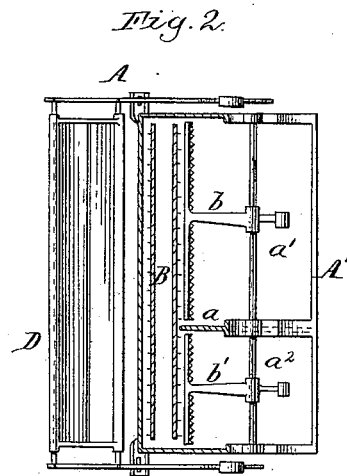
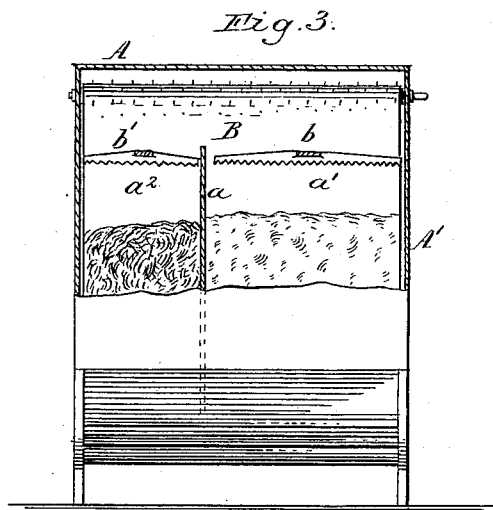
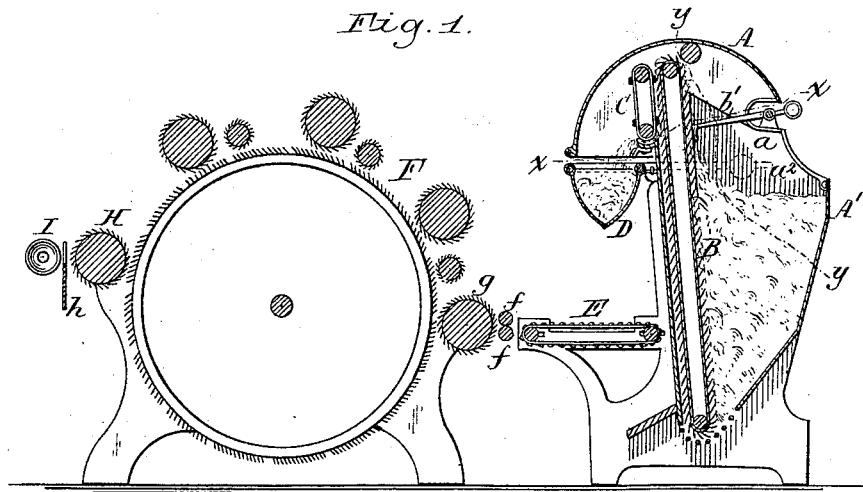
(No Model.)

J. F. HENRY.

MACHINE FOR MAKING SLIVERS FOR THE PRODUCTION OF CLOUDED YARN.

No. 384,624.

Patented June 19, 1888.



Geo. Buchheit Jr.
Theo. L. Popp. } Witnesses.

James F. Henry Inventor:
By Wilhelm & Bonnet,
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UNITED STATES PATENT OFFICE.

JAMES F. HENRY, OF LITTLE FALLS, NEW YORK, ASSIGNOR OF ONE-HALF
TO WALTER W. WHITMAN, OF SAME PLACE.

MACHINE FOR MAKING SLIVERS FOR THE PRODUCTION OF CLOUDED YARN.

SPECIFICATION forming part of Letters Patent No. 394,624, dated June 19, 1888.

Application filed June 2, 1887. Serial No. 240,051. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. HENRY, of Little Falls, in the county of Herkimer and State of New York, have invented new and useful Improvements in Machines for Making Slivers for the Production of Clouded Yarn, of which the following is a specification.

This invention relates to the manufacture of slivers, ropings, or drawings for making clouded yarns.

The object of this invention is to produce in a simple and expeditious manner a sliver in which fibers of two or more different colors are united in such manner that the different colors form concentric layers in the sliver, which, when the sliver is fed to the finishing-cards, will be commingled and produce a clouded yarn suitable for producing knit or woven goods of clouded appearance.

My invention consists in improvements in the feed mechanism whereby loose fibers of different colors are fed to the carding-engine simultaneously side by side, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation of a carding-engine which is employed in practicing my invention. Fig. 2 is a section of the feeder in line *x x*, Fig. 1. Fig. 3 is a section of the feeder in line *y y*, Fig. 1. Fig. 4 is a top plan view of the doffer, doffer-knife, and sliver-guide. Fig. 5 is a cross-section of a sliver composed of fibers of two different colors.

Like letters of reference refer to like parts in the several figures.

A represents an automatic card-feeder, which in its general construction is well known—such, for instance, as the feeder described and shown in Letters Patent No. 216,373 to W. C. Bramwell, dated June 10, 1879.

A' represents the receptacle for the wool or other fiber, which is divided in this case by a longitudinal partition, *a*, into two feed-boxes, *a' a'*, arranged side by side, each adapted to receive fibers of one color. These feed-boxes are so proportioned as to size that they will feed the desired quantities of the different colors to the cards. In the case illustrated in the drawings the small feed-box *a'* receives the

black fiber and the large feed-box *a'* the white fiber.

B represents the elevating-apron, which removes the fiber from both feed-boxes, and *b b'* represent the reciprocating combs, which sweep the excess of elevated fiber back into the feed-boxes.

C represents the stripper-apron, which removes the fiber from the elevating-apron B and delivers it to the automatic scale D, which in turn delivers the two colors side by side to the feed-apron E when the proper weight has accumulated.

F represents the carding-engine, provided with the usual feed-rollers, *f f*, lick-in *g*, and other well-known appurtenances.

H represents the doffer, *h* the doffer-knife, and I the trumpet-shaped sliver-guide, all of any ordinary or suitable construction.

J represents the sliver as it passes from the doffer mechanism to the guide I. The formation of the sliver is such that the inner or core part, *j*, of the sliver is composed solely of that color which is carried on the doffer farthest from the sliver-guide, being black in this case.

As the formation of the sliver proceeds, the next color is taken up from the doffer and wrapped around the black core portion *j* of the sliver, forming in this case a concentric envelope, *j'*, so that the sliver consists of a black core, *j*, and a white surrounding part *j'*. If three or more colors are passed through the breaker side by side, the sliver is composed of three or more concentric layers formed by the different colors. The sliver so produced is then fed to the finishing-cards by the usual oblique feeder, whereby the different colors are removed and commingled in small quantities at a time, producing a clouded yarn, which is very desirable for manufacturing knit goods of clouded appearance—for instance, undershirts, drawers, &c.—and also for manufacturing woven goods. By thus carding the different colors simultaneously upon the same carding-engines the productive capacity of a train of engines is not reduced in making clouded goods, as it is when the different colors are carded separately. An ordinary carding-engine can be adapted at small cost to produce clouded goods in the described manner, and the

cost of operating the engines is in no wise increased. The colors are very nicely mingled in the ropings produced from the slivers by the finishers, and the clouded goods manufactured therefrom present a very attractive appearance.

I do not wish to claim in this application the herein-described method of producing the compound sliver, as I have filed an application for patent of even date herewith for said method.

I claim as my invention—

1. In a feeder for carding-engines, the combination, with the elevating-apron, of several feed-boxes arranged side by side in front of the elevating-apron, whereby fibers of differ-

ent colors or kinds are simultaneously fed to the elevating apron side by side, substantially as set forth.

2. In a feeder for carding-engines, the combination, with the elevating-apron, of a fiber-receptacle provided with a longitudinal partition in front of said apron and separate combs arranged in said receptacle on opposite sides of said partition, substantially as set forth.

Witness my hand this 26th day of May, 1887.

JAMES F. HENRY.

Witnesses:

JAMES HART,

WALTER W. WHITMAN.