

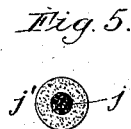
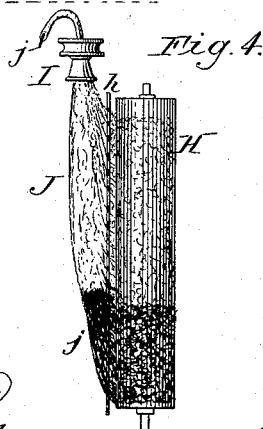
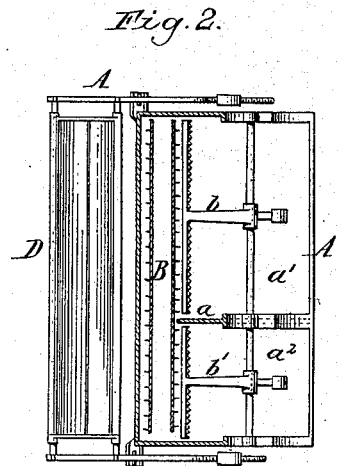
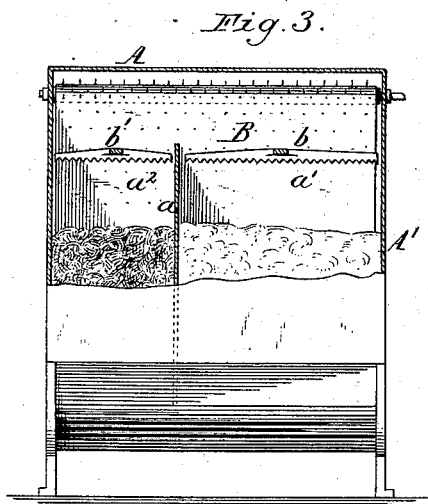
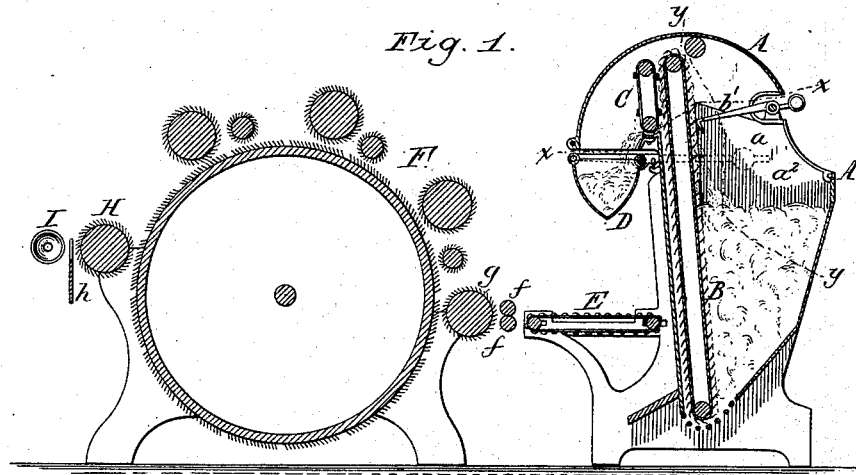
(No Model.)

J. F. HENRY.

METHOD OF MAKING SLIVERS FOR THE PRODUCTION OF CLOUDED YARN.

No. 384,690.

Patented June 19, 1888.



Chas. Buchheit
Geo. Buchheit Jr. } Witnesses:

James F. Henry Inventor.
By Wilhelm H. Bonnet.
Attorneys.

UNITED STATES PATENT OFFICE.

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

METHOD OF MAKING SLIVERS FOR THE PRODUCTION OF CLOUDED YARN.

SPECIFICATION forming part of Letters Patent No. 384,690, dated June 19, 1888.

Application filed June 2, 1887. Serial No. 240,050. (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 a new and useful Improvement in the Method of 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 of the novel method of producing the sliver, which will be herein-after fully described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a sectional elevation of a carding-engine which may be employed in practicing my invention. Fig. 2 is a section of the feeder in line *xx*, Fig. 1. Fig. 3 is a section of the feeder in line *yy*, 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.

In practicing my invention two or more batches of loose fiber of different colors—wool or cotton—are fed to the first carding-engine simultaneously side by side, so that the filaments which are carried off by the carding-cylinder, workers, &c., and which are finally removed by the doffer, consist in different parts of the cards, transversely of the card-cylinders, of different colors, which pass through the cards side by side without becoming commingled, and are successively removed by the doffer. In assembling these fibers in a sliver, roping, or drawing, the fibers are removed from the doffer transversely, beginning at one end of the doffer and running toward its opposite end, whereby the color lying on the doffer farthest

from the sliver-guide is caused to form the core or central portion of the sliver and the colors following farther on toward the sliver-guide are wound around this core and envelop the same in concentric layers. The sliver so produced is then fed to the finisher by the usual oblique feeder, whereby the different colors are removed by the roller of the finisher-card and commingled in small quantities at a time, producing clouded ropings which, when spun, form a clouded yarn, which is very desirable for manufacturing knit goods of clouded appearance—such as drawers, undershirts, &c.—and also for manufacturing woven goods.

In the accompanying drawings, A represents an automatic card-feeder which in its general construction is well known, being 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 compartments, *a'* *a''*, arranged side by side, each adapted to receive fibers of one color. These compartments 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 compartment *a''* receives the black fiber and the large compartment *a'* the white fiber.

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

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, *ff*, 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 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 finisher in the usual way. 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 commingled 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 construction of the apparatus herein described, as I have filed an application for patent of even date herewith for the novel features of said apparatus.

I claim as my invention—

The herein-described method of producing a sliver composed of concentric layers of different fibers, which consists in feeding loose fibers of different colors or kinds as contradistinguished from slivers or ropings to the carding-engine simultaneously and separately side by side, carding the several colors or kinds of fibers simultaneously side by side, and removing the several colors or kinds of fiber successively from the doffer and forming the same into a single sliver, one color or kind forming the core of the sliver and the following kinds or colors forming successive concentric layers around said core, substantially as set forth.

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

JAMES F. HENRY.

Witnesses:

JAMES HART,

WALTER W. WHITMAN.