Price & Haythorn,
Carding Machine.

No. 21,364. Patented Aug 31, 1858.

Fig. 1.

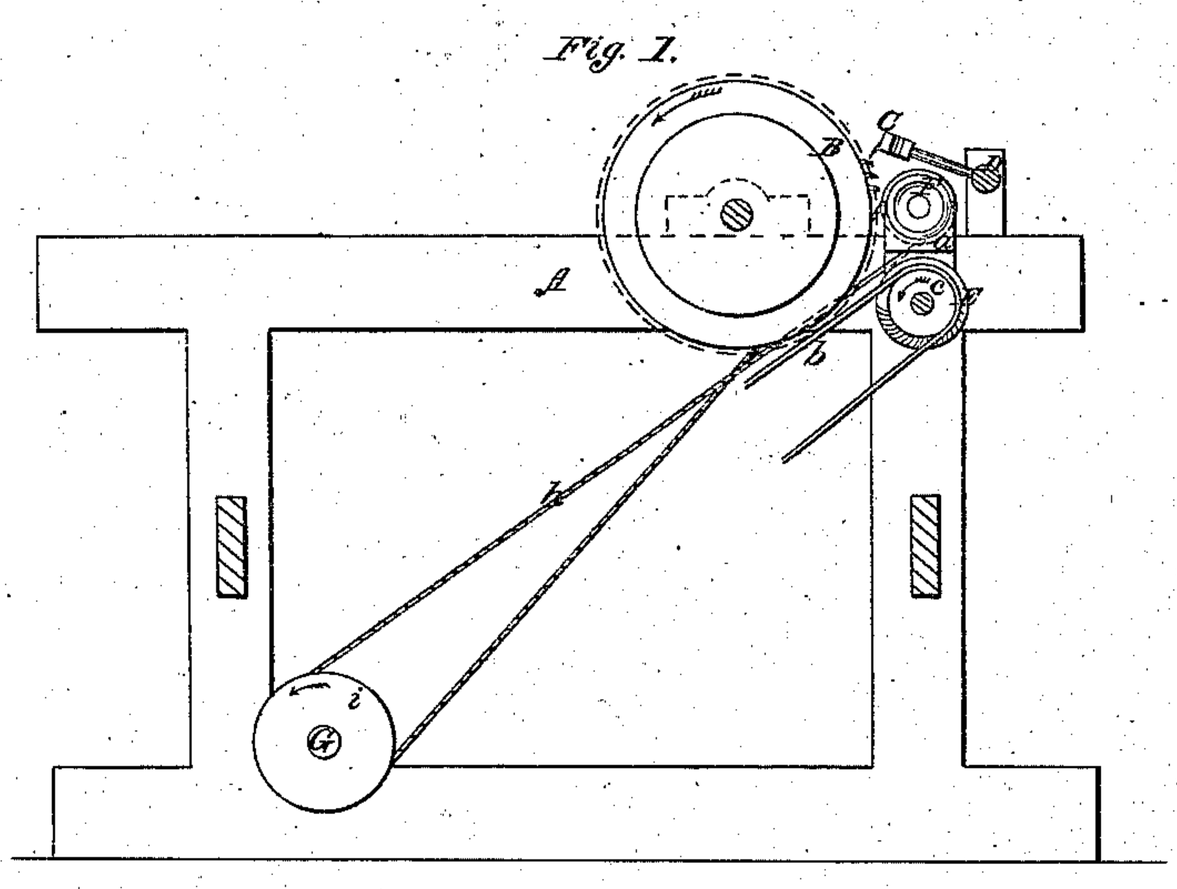
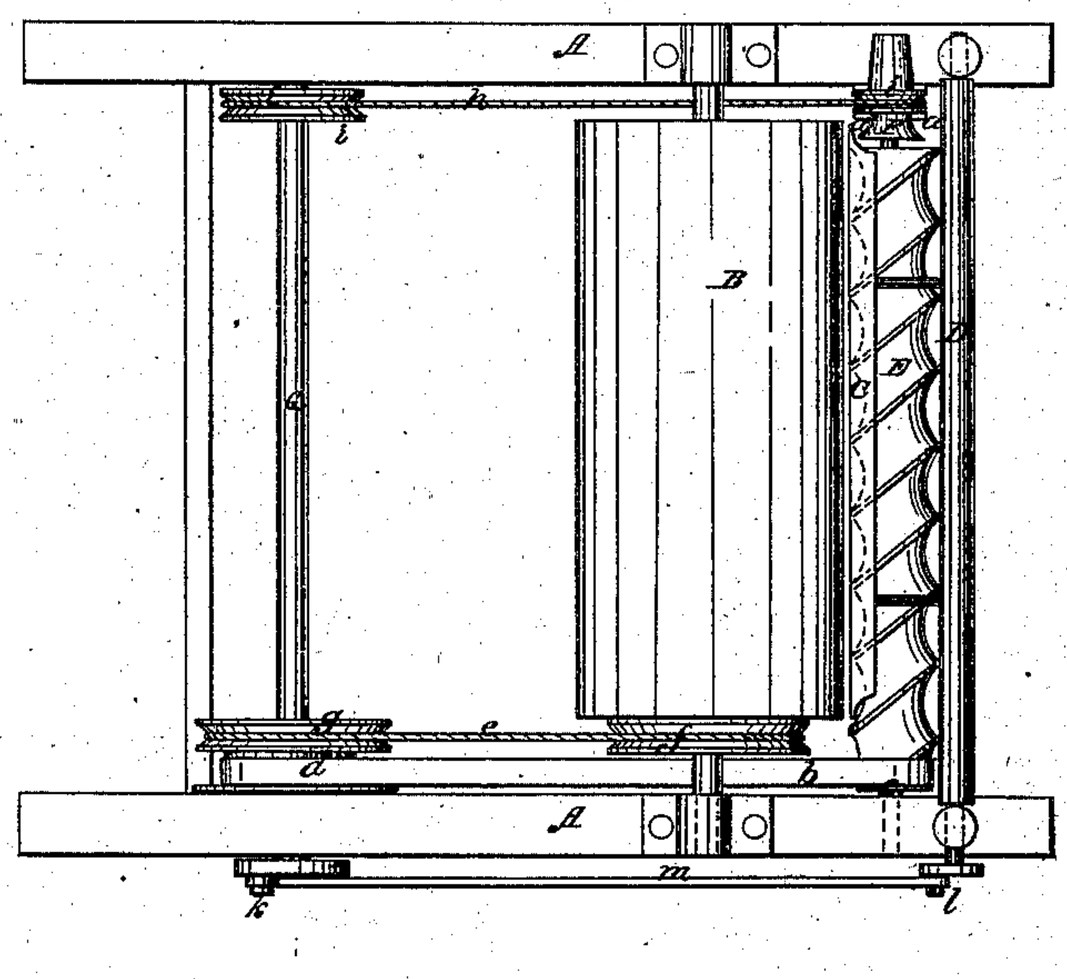


Fig. 2.



UNITED STATES PATENT OFFICE.

CHARLES E. PRICE AND JOSEPH HAYTHORN, OF THOMPSONVILLE, CONNECTICUT.

IMPROVEMENT IN CARDING-MACHINES.

Specification forming part of Letters Patent No. **21,364**, dated August 31, 1858.

To all whom it may concern:

Be it known that we, CHARLES E. PRICE and JOSEPH HAYTHORN, of Thompsonville, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Carding-Machines for Carding Cotton, Wool, or other Fibrous Substances; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of part of the framing and the doffer of a carding-machine, showing also the application of our invention. Fig. 2 is a plan of the same.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in the employment of a revolving spirally grooved or threaded cylinder applied below the comb, which removes the fleece from the doffer, and near to and parallel with the doffer for the purpose of receiving the fleece as it is struck from the doffer by the comb and conveying the same away, by means of its revolution in direction parallel with the axis of the doffer, through a tube arranged at one side of the machine. By this contrivance we are enabled to produce a better quality of yarn from stock of given quality and make very little waste.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A is the framing of the machine.

B is the doffer, which is intended to be applied and operated in the usual manner.

C is the comb, which removes the fleece from the doffer, attached to a rock-shaft D, and having the usual vibrating motion.

E is the spirally grooved or threaded cylinder, made of wood or metal, or of wood with the tops of its threads faced with metal, the said cylinder being furnished with journals which are fitted to rotate in suitable bearings in the frame A, and being arranged nearly close to and parallel with the doffer below the comb C.

F is the tube through which the sliver is conveyed by the spirally grooved or threaded cylinder, said tube being arranged with its axis parallel to those of the doffer and grooved or threaded cylinder E, and having a funnel-mouth which occupies a position above and near one end of the cylinder E, the said tube being held in a bearing *a* on the top of the frame.

The cylinder E receives a continuous rotary motion from a band *b*, which runs to a pulley *c* at one end of it, from another pulley *d* on a shaft G, which is arranged parallel with the doffer in suitable bearings, and which derives rotary motion from the doffer through a band *e*, running to a pulley *g* at one end of it, from a pulley *f* on the doffer-shaft. The tube F derives rotary motion from the shaft G through a band *h*, running from a pulley *i* on said shaft to a pulley *j* on said tube. The comb rock-shaft D also derives the necessary motion through a rod *m*, running to a crank *l* on one end of it, from an eccentric wrist-pin *k* on the said shaft.

The fleece as it is struck from the doffer by the comb C is deposited upon the spirally grooved or threaded cylinder, through the action of whose spiral groove or thread, produced by its rotary motion, the fleece is conveyed in the form of a sliver to and through tube F, whence it passes to a can or other receptacle, receiving in its passage through said tube a slight twist, which gives it strength and tenacity.

We are aware that an endless apron has been used as a carrier for the purpose of removing the fleece athwart the doffer, and we are also aware that a spiral conveyer is of familiar application in machinery; therefore we do not claim, broadly, either the endless belt or spiral conveyer; but

What we claim as our invention, and desire to secure by Letters Patent, is—

The spirally grooved or threaded cylinder E, applied in the manner substantially as described, in combination with the doffer and comb and with a tube F, to operate as set forth.

CHARLES E. PRICE.
JOSEPH HAYTHORN.

Witnesses:
JAMES CROMPTON,
GEORGE C. OWEN.