No. 705,715. Patented July 29, 1902.

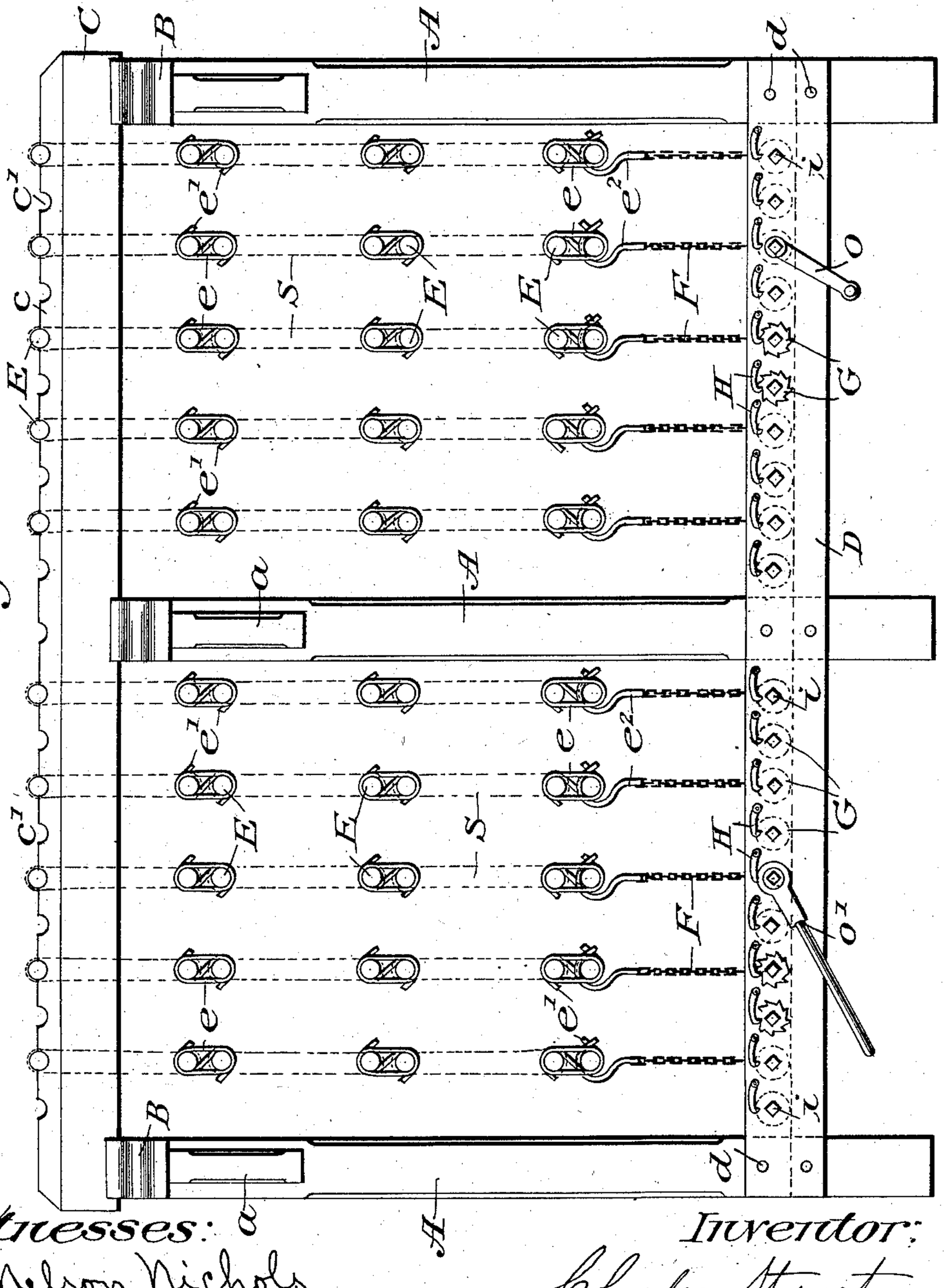
C. STUART.

PROCESS OF INTENSIFYING THE LUSTER OF SILK FIBER.

(Application filed Jan. 17, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses:
L. Nelson Nichols
Louis A. Piaget

Inventor:
Charles Stuart
By John F. Kerr, Atty.

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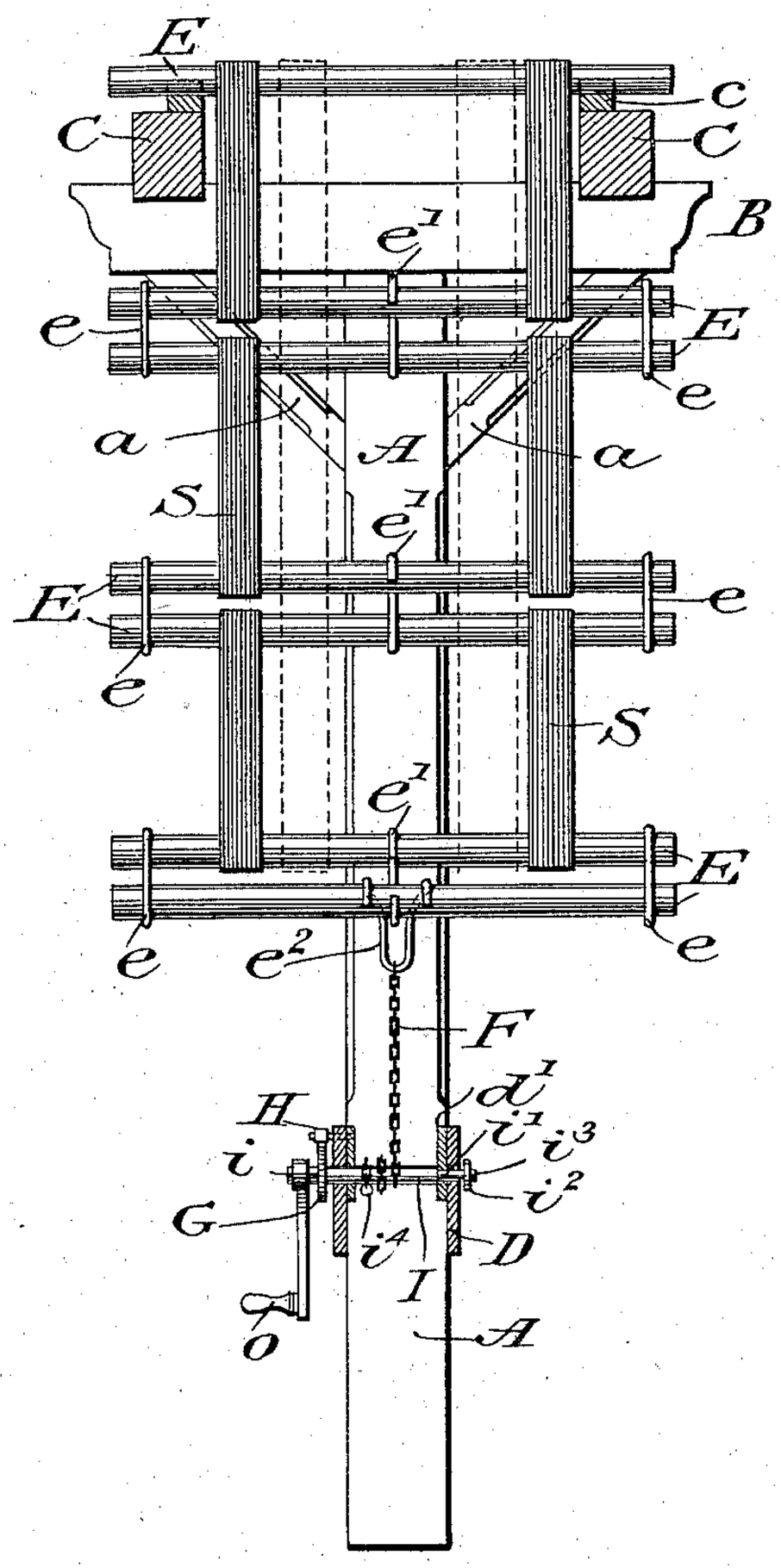
Fig. 2.



Witnesses:
L. Nelson Nichols.
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Inventor:
Charles Stuart
By John T. Kerr
Atty.

UNITED STATES PATENT OFFICE.

CHARLES STUART, OF PATERSON, NEW JERSEY.

PROCESS OF INTENSIFYING THE LUSTER OF SILK FIBER.

SPECIFICATION forming part of Letters Patent No. 705,715, dated July 29, 1902.

Application filed January 17, 1902. Serial No. 90,132. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES STUART, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented a certain new and useful Improvement in the Process of Intensifying the Luster of Silk Fiber, of which the following is a full, clear, and exact description.

The object of the invention is to give to silk fiber and the fabric into which it is woven a glossiness or permanent luster of great brilliancy; and it consists in taking the skein of silk fiber as it comes from the hydro-extractor after being dyed, stretching it while damp, and subjecting it while so damp and stretched for three or four hours to a drying heat of a temperature of about 120° Fahrenheit until completely dry.

The old process of drying the fiber before placing it in skeins two or three at a time on stretching-posts in a steam chest or stretcher, where it is treated to a bath of live steam, which is admitted into the steam-stretcher, completely enveloping and moistening the fiber for about three minutes while it is being stretched, leaves the silk damp after being stretched in the steam-chest, and in drying afterward invariably shrinks and loses its luster, while my process has in practice given better results, producing a more brilliant and permanent luster, which is retained and shown in the finished fabric.

In carrying out this invention I use a drying and stretching room, in which a silk-stretching machine is erected, from which I suspend skeins of fiber, either in horizontal or vertical series, on poles, rods, or other suitable supports, the number depending on the size of the machine. The damp skeins are taken from the hydro-extractor after dyeing, are suitably mounted and stretched on these supports, and are maintained thereon in a stretched condition to prevent the contraction or shrinkage of the fiber while being dried, as above stated. When the moist fibers have been tightened on the stretching-machine, the temperature of the room is regulated, as hereinbefore set forth. In other words, my invention consists in the process of intensifying the luster of silk fiber, which consists in taking the skeins directly from the hydro-extractor after dyeing and while still damp stretching them and simultaneously maintaining them in a stretched condition and subjecting them in a closed chamber to dry air at a temperature of about 120° Fahrenheit and preventing shrinking during the drying. The heated air of the drying-room gradually dries the moist fiber, and owing to their inability to shrink, on account of the stretching machine, they are given an intensified luster. With skeins weighing ten to a pound I can easily, in putting my invention into practice, intensify the luster of two hundred and fifty pounds at once. A comparison with the old methods or those now in vogue will demonstrate the advantages in an economical point of view of my invention.

When the skeins of fiber are taken from my stretching-machine in the drying-room, they are perfectly dry and are ready to go to the manufacturer. They do not shrink and in the woven fabric maintain the intensified luster imparted by my process.

What I claim as my invention, and desire to secure by Letters Patent, is—

The process of intensifying the luster of silk fiber, which consists in taking the skeins directly from the hydro-extractor after dyeing, and, while still damp stretching them and simultaneously maintaining them in a stretched condition and subjecting them in a closed chamber to dry air at a temperature of about 120° Fahrenheit, thereby preventing shrinking during the drying, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES STUART.

Witnesses:
ALFRED H. SONNTAG,
ERNEST C. LEERS.