

D. WHEELER.
Finishing Hats.

No. 218,465.

Patented Aug. 12, 1879.

Fig 1.

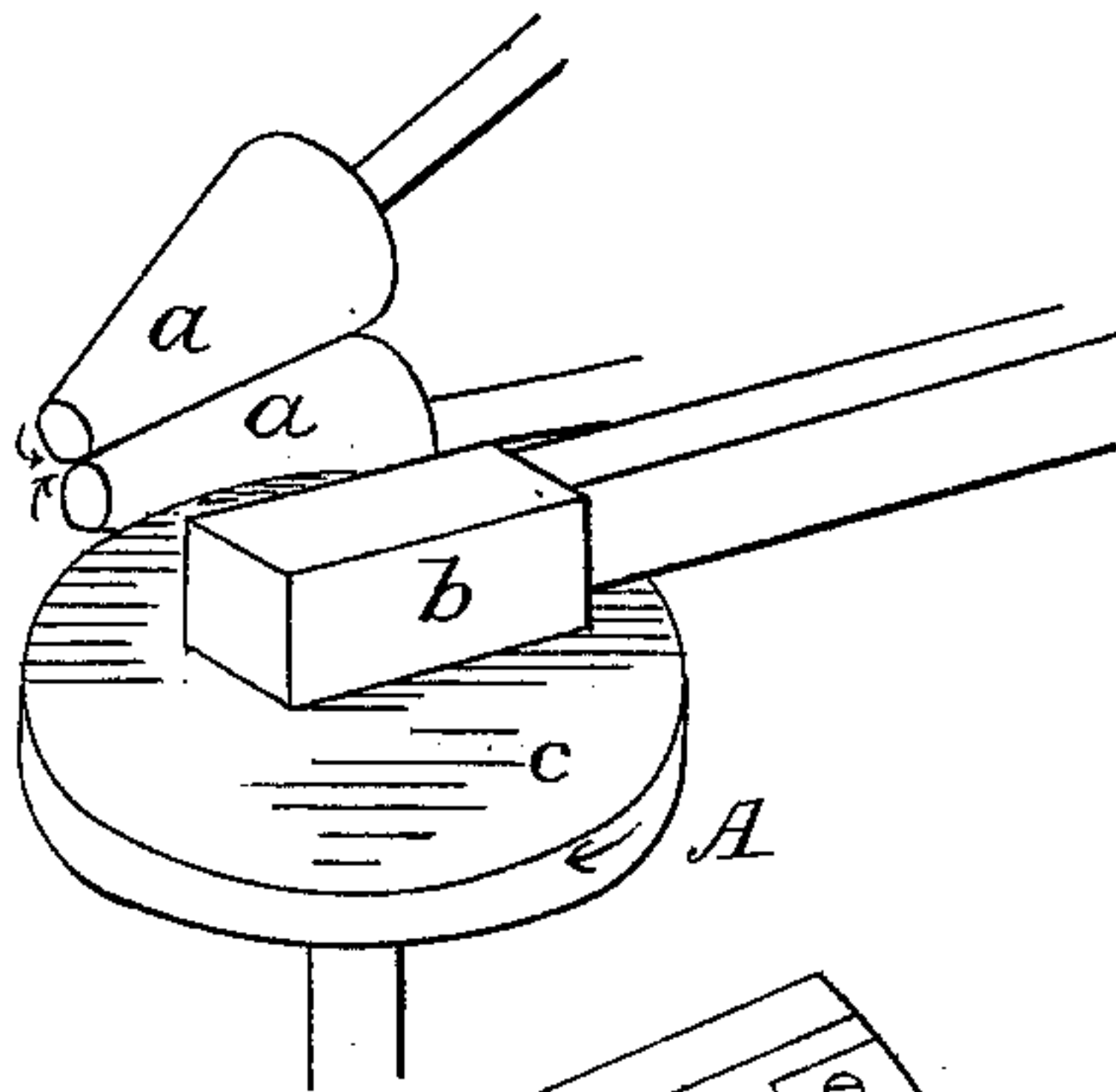


Fig 2.

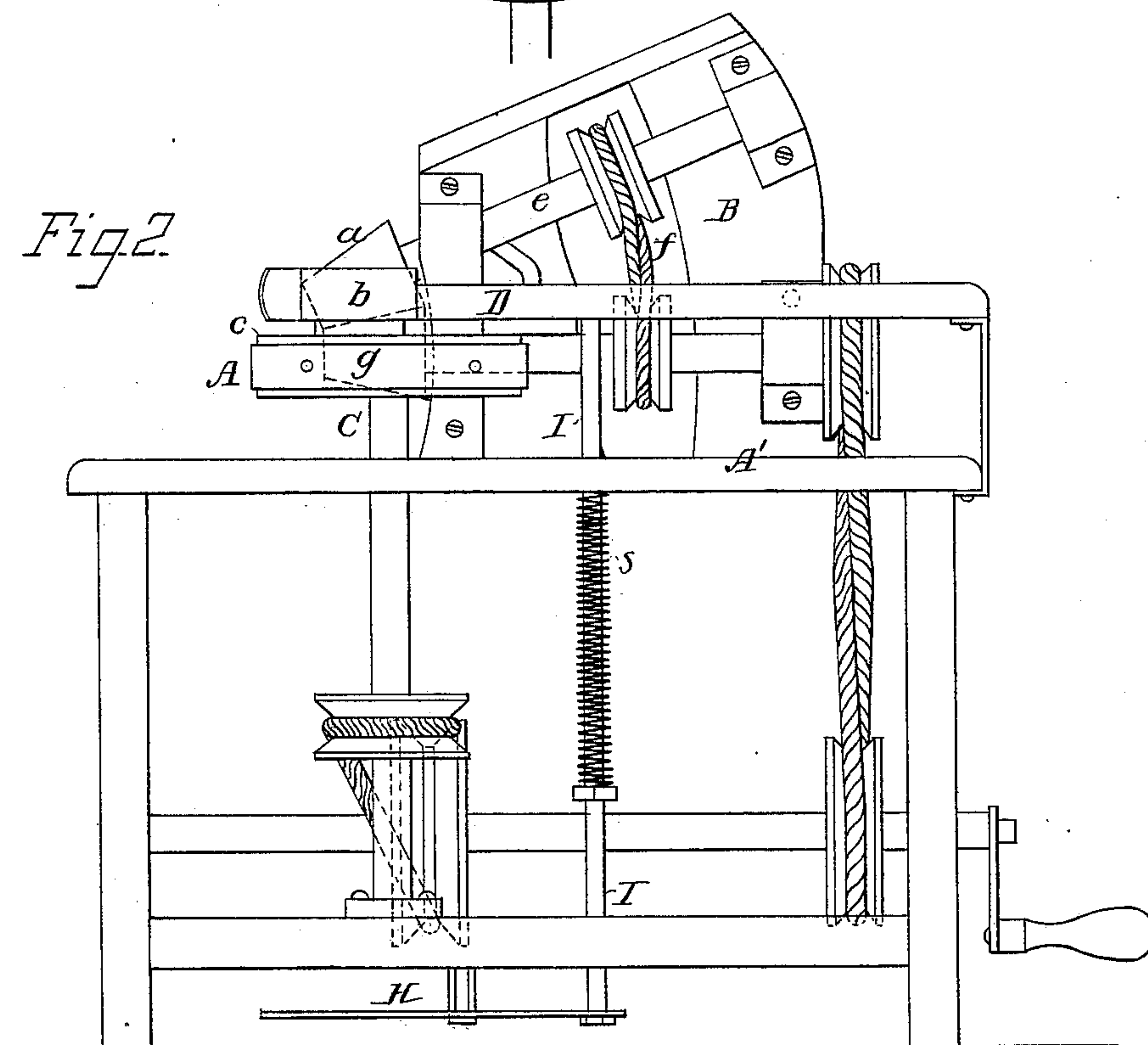
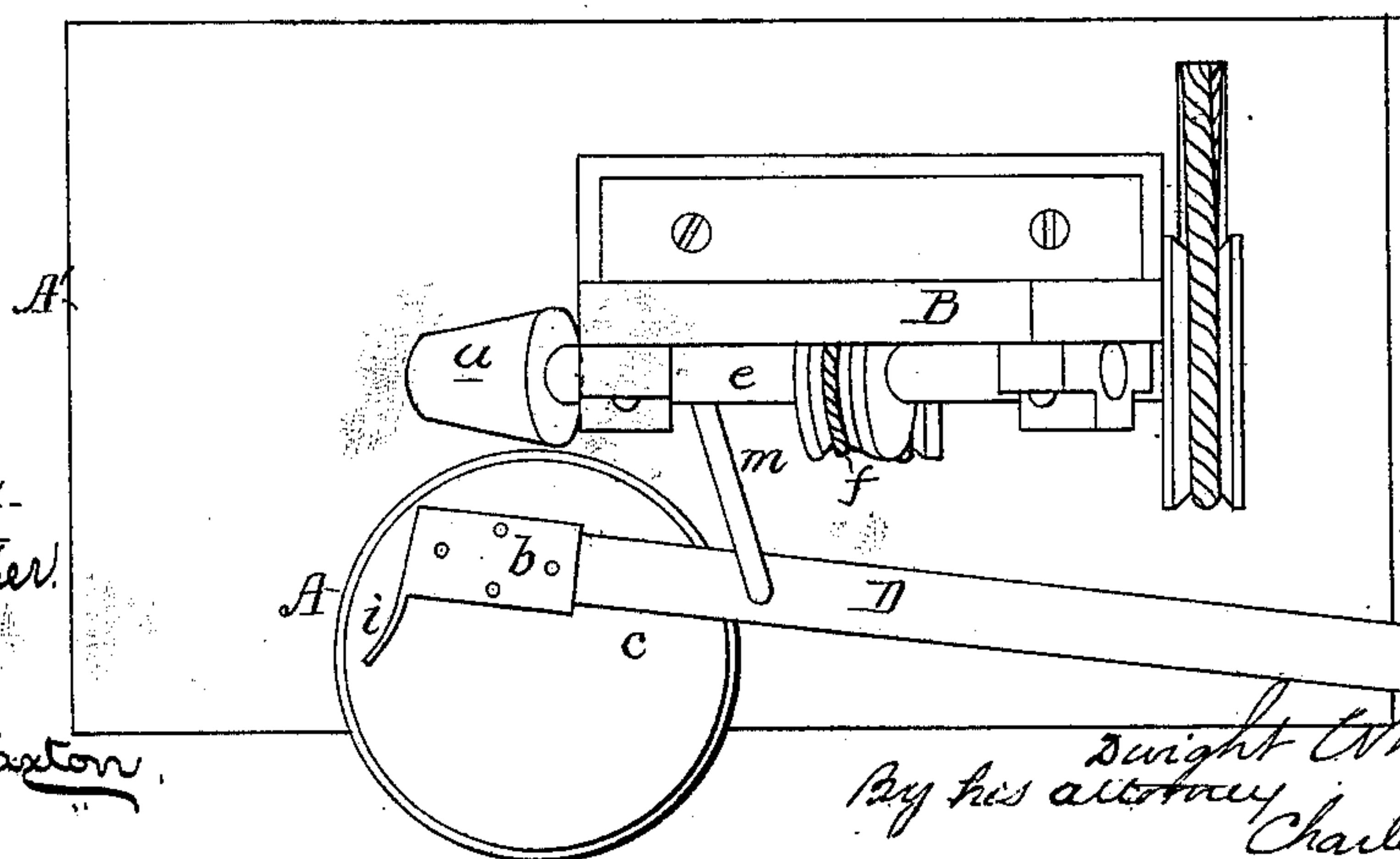


Fig 3.



Attest
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UNITED STATES PATENT OFFICE.

DWIGHT WHEELER, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN FINISHING HATS.

Specification forming part of Letters Patent No. **218,465**, dated August 12, 1879; application filed June 28, 1879.

To all whom it may concern:

Be it known that I, DWIGHT WHEELER, of Bridgeport, Fairfield county, Connecticut, have invented Improvements in Finishing Hats, of which the following is a specification.

The object of my invention is to impart a better finish to hats than results from ordinary modes of treatment, and to facilitate the finishing operations.

In the drawings forming part of this specification Figure 1 is a diagram illustrating one mode of carrying out my improvement. Fig. 2 is a side view of the machine employed; Fig. 3, a plan view.

Heretofore, in finishing felt hats on the brim it has been common to iron the brim, or to press the same between two heated surfaces, but with very unsatisfactory results, and many unsuccessful attempts have been made to impart to the brim the same smooth and silky finish that is possessed by the crown.

I have found that by subjecting the brim, preferably under heat and pressure, to the action of a rapidly-moving tool covered with felt, carpet, brush, or other frictional material, a most desirable finish is imparted to the surface of the hat. Thus, if the brim of a hat carried forward by means of feed-rolls *a*, is passed between a presser-block, *b*, and a revolving disk-like tool, *A*, having a facing, *c*, of felt, cloth, brush, &c., the face of the hat operated upon by the felt *c* and pressed against the felt by the block will in a few moments receive the smooth silky finish desired.

Various mechanisms may be employed for carrying out this process. One which I have found in practice to be effective is shown in Figs. 2 and 3, in which *A'* is a table supporting a bracket, having bearings for the shafts of the conical feed-rolls *a*, the shaft *e* of the upper roll being vertically adjustable, and being driven by a belt, *f*, from a pulley on the lower shaft.

The disk *A* is mounted on a vertical shaft, *C*, and is covered by a sheet of felt, *c*, which is stretched over the upper face of the same, and is secured by a circumferential band, *g*.

The presser-block *b* is made in the form of an iron, and is hollow to receive a heated

block, or it may be heated by steam passed to and from the same through suitable pipes, or by gas-jets, or in any other suitable manner.

The iron is shown secured to an adjustable bar, *D*; but it may be attached to a vertical bar, or adjustably held in place in any other manner, and at the outer end is a blade, *i*, affording a bearing for the crown of the hat.

A treadle is secured to a rod, *I*, connected to the bar *D*, from which an arm, *m*, extends beneath the shaft *e*, which, with the bar and iron, may therefore be elevated by means of the treadle, so as to permit the brim to be introduced simultaneously between the feed-rolls and between the iron and the disk.

A spring, *s*, serves to depress the bar *D* and maintain the requisite pressure of the iron upon the brim; but any other means may be adopted for this purpose.

The shafts are driven, by any suitable gearing, in the direction indicated by their arrows.

While a block of wood, iron, or other material may be used, I prefer to employ a heated iron, as I thus both iron and finish the brim at the same time. The heat, moreover, facilitates the finishing.

While the apparatus is shown as adapted for finishing the brims, the crown may be treated in like manner by modifying the parts accordingly.

It will be understood that the feed-rolls move at such a speed that there is a drag upon the hat, permitting a brushing action by the felt-covered disk.

I claim—

1. The mode described of finishing felt hats, the same consisting in subjecting the surface to the action of a rapidly-moving tool, covered with felt or its equivalent, while pressed against the latter, substantially as set forth.

2. The mode of finishing felt-hat bodies by subjecting the same to simultaneous friction, heat, and pressure, substantially as set forth.

3. The combination of the revolving rotating felt-covered disk or tool *A* and block *b*, adapted to be pressed toward the felt, and provided with heating appliances, as specified.

4. The combination of the rotating felt-covered disk *A*, adjustable block *b*, and feed-rolls *a*, and devices for driving the rolls at a speed

less than that of the disk, for the purpose set forth.

5. The combination of the disk A, block *b*, feed-rolls *a*, treadle H, and connecting-rod, whereby the block and upper roll may be raised by means of the treadle, substantially as set forth.

6. The blade *i*, combined with the block *b*, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DWIGHT WHEELER.

Witnesses:

GEO. STILLMAN,

C. F. JUDSON.