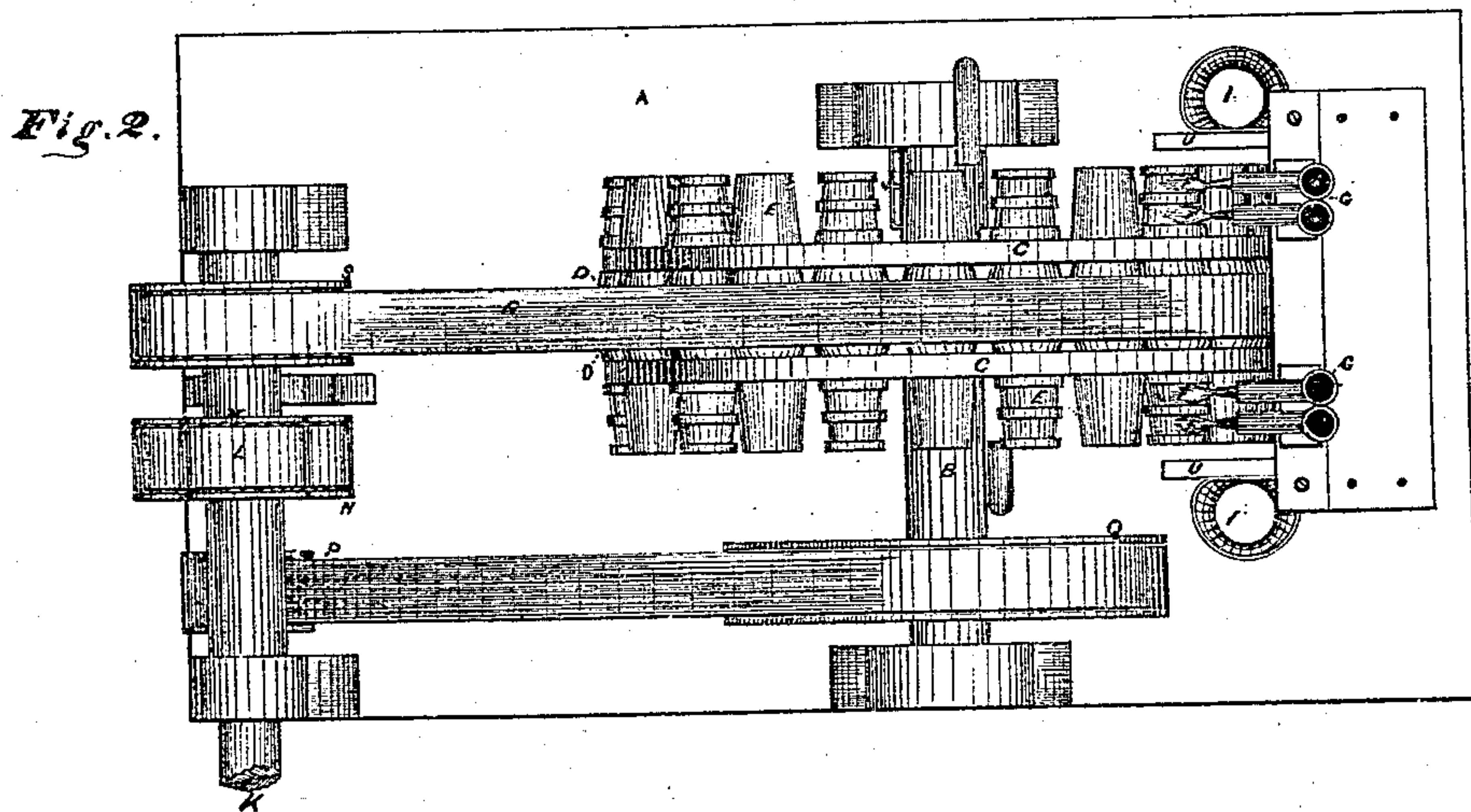
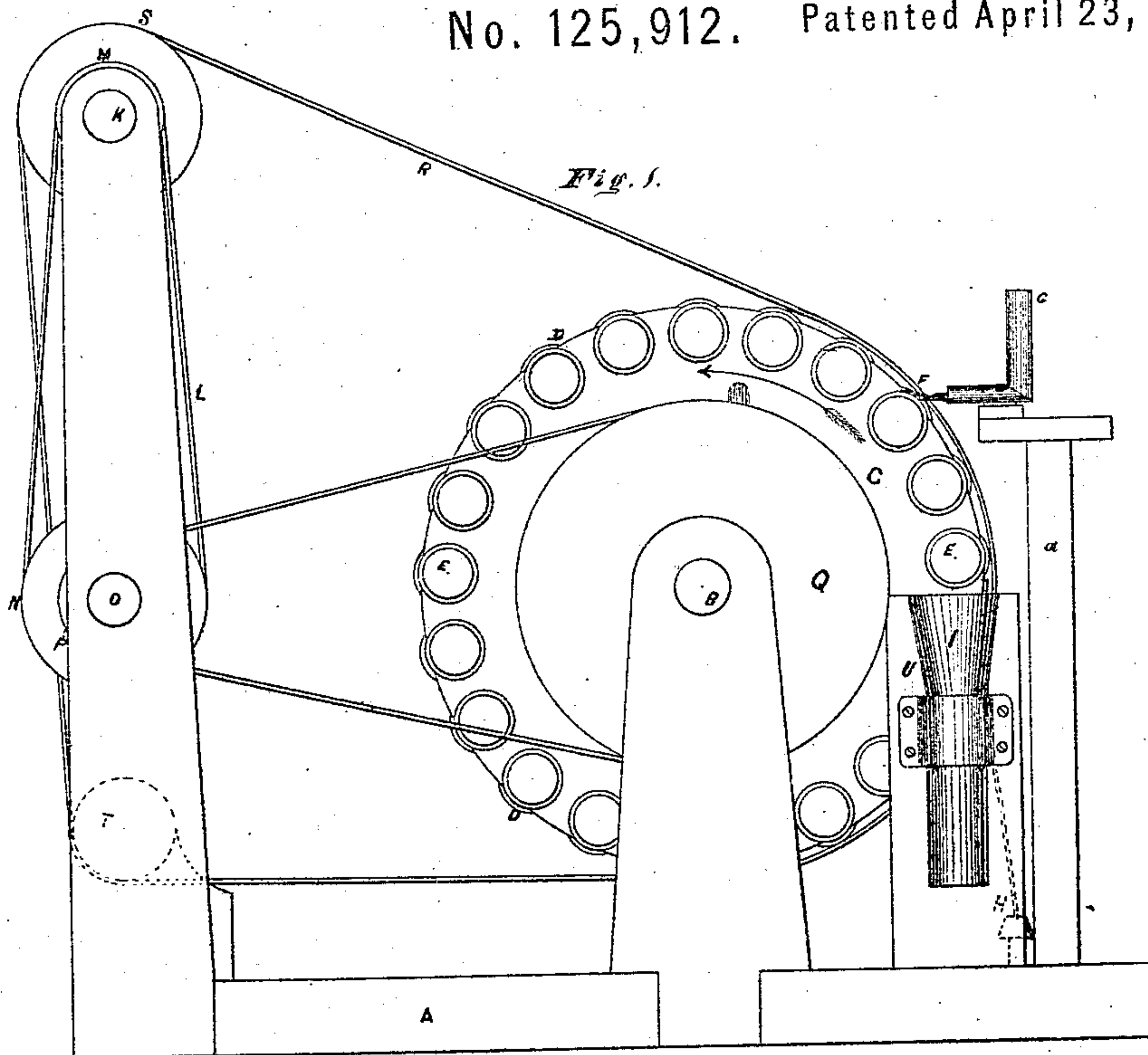


HENRY STIASSNY.
Improvement in Machine for Coloring Capsules for Bottles.
No. 125,912. Patented April 23, 1872.



WITNESSES:

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IMPROVEMENT IN MACHINES FOR COLORING CAPSULES FOR BOTTLES.

Specification forming part of Letters Patent No. 125,912, dated April 23, 1872.

Specification of certain Improvements in Machines for Coloring Capsules, invented by HENRY STIASSNY, of the city, county, and State of New York.

Nature and Object of the Invention.

Capsules designed to be placed over the corks and upon the necks of bottles are sometimes colored, or, in other words, coated with a colored varnish made of gum lac and other ingredients to give them a more fanciful appearance. This is usually better done by placing the capsules upon a chuck or mandrel of a lathe and giving rotation to the lathe, at the same time holding against the capsule a brush charged with the colored varnish. This is a slow and tedious process, which adds very materially to the price of the capsules.

The machine which is the subject of the present invention is designed to furnish a means of performing this work much more expeditiously, and also to obviate, at least in part, the difficulty which has been experienced, in the mode previously described, from the necessity of removing the capsules immediately from the lathe as soon as they were colored, owing to the coloring varnish being then in an entirely fresh state. My invention relates to the devices, herein described, for the purpose hereinbefore stated.

Description of the Accompanying Drawing.

Figure 1 is a side view of a machine embodying my invention. Fig. 2 is a plan of the same.

General Description.

A is the frame of the machine, which frame is intended to support the working parts. B is the main shaft of the wheel C, in the rim of which wheel a series of shafts are hung, which carry the pulleys D and chucks or mandrels E, the said chucks or mandrels E being made of a conical form, and of the proper size and taper to receive and hold the capsules required to be colored. It will be observed that a part of the mandrels E have grooves turned in them, leaving only small raised portions to support the capsules. The object of this construction is to allow the capsules to be more easily removed from the mandrel after being colored, it being found that the small air-cham-

bers thus formed between the mandrel and the capsule very much facilitate the removal of the latter. F F are brushes, by which the coloring matter is applied to the capsules. Said brushes are made hollow at the root to allow the coloring matter to enter them, and are supplied from small reservoirs G G, which are supported on the top of the standard a which forms a part of the frame of the machine. There are two springs, H, one on each side of the main wheel, one of which is shown chiefly in dotted lines in Fig. 1, the lower ends of which springs are attached to the frame of the machine, and the upper ends of which press against the outside of the capsules, which may be brought opposite the bearing portion of said springs for the purpose of loosening the capsules upon the mandrels after they have been colored, and causing them to drop off into the hoppers I, which latter are open at the bottom to allow the capsules to pass through them into bags attached to the lower end of the hoppers I or into other receptacles properly placed to receive them. J is the box designed to contain soap-stone dust, and having a small spout at its lower end to discharge the soap-stone dust upon the capsules as they are brought under it for the purpose of preventing the capsules from sticking to each other in case the varnish should not be quite dry when they are discharged from the machine. K represents the line shaft from which power is derived to propel the machine. The belt L connects the small pulley M on this shaft with the larger pulley N on the shaft O, and gives motion to the latter. P is a small pulley on the shaft O, from which motion is communicated to the larger pulley Q on the shaft B. R is a belt, which passes over the pulley S on the line shaft K under the stationary pulley T, shown in the dotted lines in Fig. 1, and over the pulleys D, as shown.

Operation.

The reservoirs G G having been properly supplied with the color to be applied, (which may be a varnish made of gum lac dissolved in alcohol, with the addition of aniline or any other preferred coloring matter,) and motion being given to the line shaft in such direction as to revolve the main wheel C in the direc-

tion indicated by the arrow in Fig. 1, a slow rotation will be given to this wheel while the mandrel E will be revolved much more rapidly. I prefer to give to this main wheel a motion of about one revolution in a minute and a half, while the mandrels E may be speeded up to three hundred revolutions per minute. An attendant, standing at the end of the machine, which is shown at the right hand in the drawing, places the capsules to be colored, one with each hand, on the mandrels E, which are at the moment between the ends of the springs H H and the brushes F F, and, as the main wheel revolves, these capsules pass on in rapid revolution under the brushes F F and receive the coloring matter therefrom. As the rotation of the main wheel C carries them forward, the pulleys D D pass out of contact with the belt R and gradually lose their speed; but as they pass on to the under side of the main wheel, are again put in rapid motion by coming in contact with the belt R. The boxes J (one on each side of the machine, placed directly under the shaft B) being supplied with ground soap-stone, a small stream of the soap-stone is being continually discharged through a small pipe or hole in the bottom of the box upon the capsules as they pass under it, which prevents the varnish from sticking to the inside of the next capsule if it should happen to be not quite dry at the moment when the capsule is discharged from the mandrel. As the wheel C continues to revolve, the capsules having been colored, and dusted with soap-stone, as above described, are brought in contact with the springs H H while still in rapid revolution, and the friction of these springs upon them loosens them upon the mandrels, and causes them to fall off into the hoppers I immediately after they have passed the guides or guards U U, which prevent their falling off before they rise above the top of the hoppers. As the only labor to be performed by the attendant is to keep up a supply of coloring matter and soap-stone, and to place the capsules on the mandrels as they arrive at the proper point, it will be seen that the work is very much facilitated, and the number of capsules that can be colored by a single person very much increased by this machine, thereby very materially reducing their cost.

To give the capsules a still more fanciful appearance, it is sometimes considered desirable to color them in stripes of different colors. This, in the mode of coloring ordinarily practiced, adds very materially to the time and expense; but to do so with this machine it is only necessary to supply different colors to the separate reservoirs G G—that is to say, one color to the reservoir which supplies the brush that colors one part of the capsule, and another to the brush which colors the other part of the capsule; and by multiplying the number of the reservoirs G G, and using smaller brushes, a larger number of colors may be applied. Stop-cocks may be placed in the tubes leading from the reservoirs G and soap-stone box to shut off the supply, when required, by the stoppage of the machine or for other reasons.

Claims.

I claim as my invention—

1. The combination of the main wheel C, the chucks or mandrels E E, adapted to receive and hold the capsules, and pulleys D D or their equivalent, substantially as hereinbefore set forth.
2. The combination of the main wheel C, the chucks or mandrels E E, the pulleys D D, and the brushes F F, substantially as hereinbefore set forth.
3. The combination of the main wheel C, the capsule-chucks or mandrels E, the pulleys D D, and the reservoir G G, substantially as hereinbefore set forth.
4. The combination of the main wheel C, the capsule-chucks or mandrels E E, the pulleys D D, the brushes F F, and the reservoirs G G, substantially as hereinbefore set forth.
5. The combination of the main wheel C, capsule-chucks or mandrels E E, pulleys D, and springs H H, substantially as hereinbefore set forth.
6. The combination of the main wheel C, capsule-mandrels E E, pulleys D, brushes F F, and box J, substantially as hereinbefore set forth.

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