No. 697,229. Patented Apr. 8, 1902.

L. APPERT.

ROLLER FOR ROLLING AND ORNAMENTING SHEET OR PLATE GLASS.

(Application filed Oct. 8, 1901.)

(No Model.)

Fig. 1

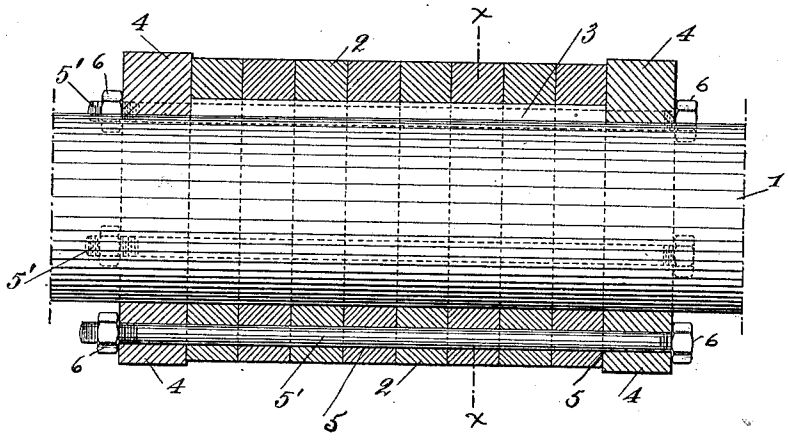
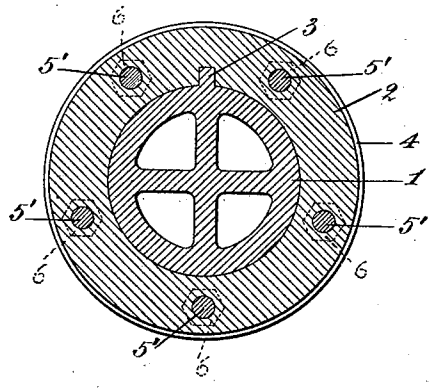


Fig. 2



Witnesses:
S. Maynard.
V. Coehne.

Léon Appert, Inventor
By Marion & Marion
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LÉON APPERT, OF PARIS, FRANCE.

ROLLER FOR ROLLING AND ORNAMENTING SHEET OR PLATE GLASS.

SPECIFICATION forming part of Letters Patent No. 697,229, dated April 8, 1902.

Application filed October 8, 1901. Serial No. 78,007. (No model.)

To all whom it may concern:

Be it known that I, LÉON APPERT, a citizen of the French Republic, residing in Paris, France, have invented some new and useful Improvements in Rollers for Rolling and Ornamenting Sheet or Plate Glass, of which the following is a specification.

My invention relates to improvements in rollers for rolling sheet-glass having on one of its faces pictures either in relief or pressed in the surface.

It is well known that the glass in question is obtained by rolling the glass while it is still in a soft and plastic state by means of metal rollers bearing on their surfaces, either in relief or cut in the surface, the picture or pictures to be reproduced inversely by the rolling on the sheet of glass. Such glass is manufactured on a large scale, yet there is the inconvenience in the present state of manufacture that whenever it is required to vary the design of the picture it is necessary to have a new roller made, and this involves a considerable outlay of money, for the roller, as well as the engraving of its surface, is very expensive. It follows that a large number of sheets with the same design are to be made before the roller can be replaced by a new one, each roller having to be worked until the capital invested therein be repaid.

The object of my invention is to do away with this inconvenience. In order to attain this object I make the roller of several distinct elements, so that if it be desired to modify the design of the picture to be produced on the glass it is only necessary to exchange one or several of the elements composing the roller.

In the accompanying drawings, Figure 1 is a longitudinal section of my roller, and Fig. 2 is a cross-section of the same on the line $x\ x$ of Fig. 1.

Similar numerals refer to similar parts in both views.

2 2, &c., are the elements, made of hollow rings all of the same diameter inside and outside, which being juxtaposed form the cylinder bearing the design or the designs, while 1 represents the hollow shaft of the roller. 3 is a rib on this shaft, upon which the elements 2 are placed on the shaft, a groove provided in the same fitting on the rib of the shaft preventing them from turning on the shaft, on which they fit with slight friction.

4 4 are rings of a somewhat larger diameter than the rings 2 2. These rings, placed at the two ends of the roller, serve to determine the thickness of the glass sheets, on one hand, and the width or length of the same, as the case may be, on the other.

5 5, &c., are holes in the rings 2 2, &c., and 4 4. They are intended to receive bars or bolts 5′, running through from one end of the roller to the other, for the purpose of pressing the rings together by means of nuts 6 at the ends of the bars or otherwise, so that when all the different parts of the roller are properly put together the latter forms one solid piece.

On the periphery of each of the rings 2, which rings may be made of the same or of different thickness, as required by the different combinations, a design or part of a design is engraved, so that when they are placed together side by side on the shaft 1 and fastened together, as heretofore mentioned, they form the cylinder provided with such design or designs as is desired to produce on the glass. Now it is easy to understand that these rings may be arranged so as to allow of different combinations, each of them producing a different design. Furthermore, the cost of these rings being but small they can be replaced by new ones, and thus the design or designs modified almost indefinitely without involving thereby any great outlay of money; but this is not the only advantage of my invention. As the roller is composed of several elements, the size of the glass sheets can also be varied and determined so as to fill the orders of the purchaser according to his desire in this respect, while by changing the rings 4 4 it is possible to give the sheets any desired thickness. It will be easily understood that this is of great importance, considered from a commercial standpoint.

It is a matter of course that the different parts of my roller may be made of any suitable material, that they may be of a form different from that shown merely as an example in the drawings, that especially the shaft of the roller may be round or square, as deemed advisable, without involving thereby a departure from the idea of the invention.

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

1. In a device for ornamenting glass, a shaft with a longitudinal feather, and cylindrical ornamented disks or plates removably set on the said shaft and bolted together, the said disks having each a notch to fit the feather on the shaft and holes for the passage of the bolts, as set forth.

2. A roller for ornamenting glass, consisting of a shaft with an exterior longitudinal feather, a plurality of cylindrical ornamented disks removably sleeved on said shaft and having notches to receive the feather, larger disks at the ends of said disks bearing against the ends of said feather and the adjacent disks and bolts passed through the end and intermediate disks and provided with nuts on their ends, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LÉON APPERT.

Witnesses:
EDWARD P. MACLEAN,
JULES FAYOLLET.