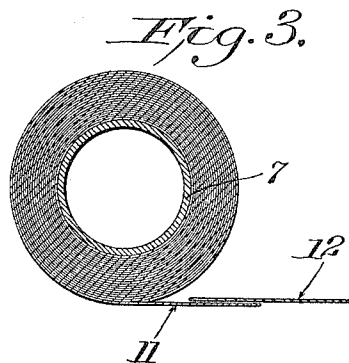
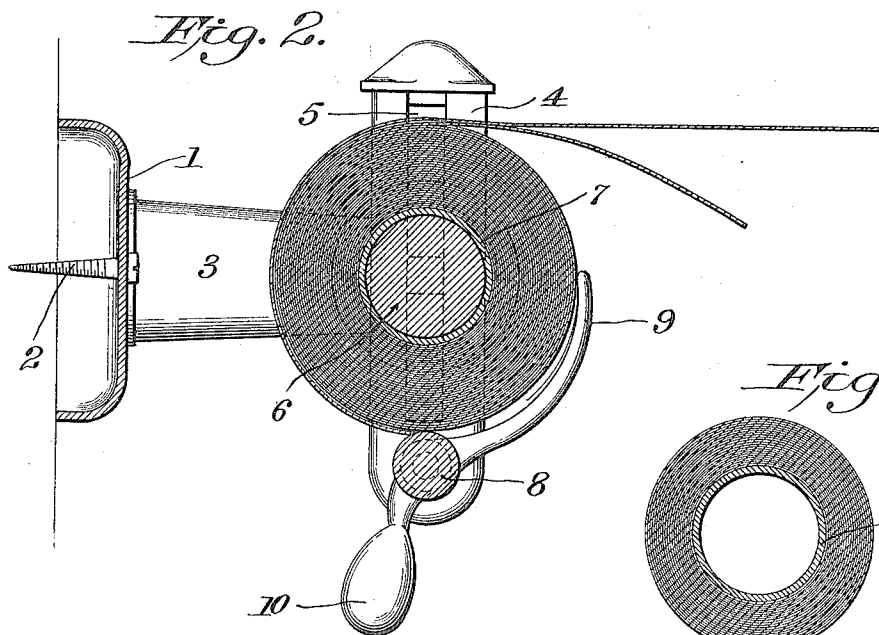
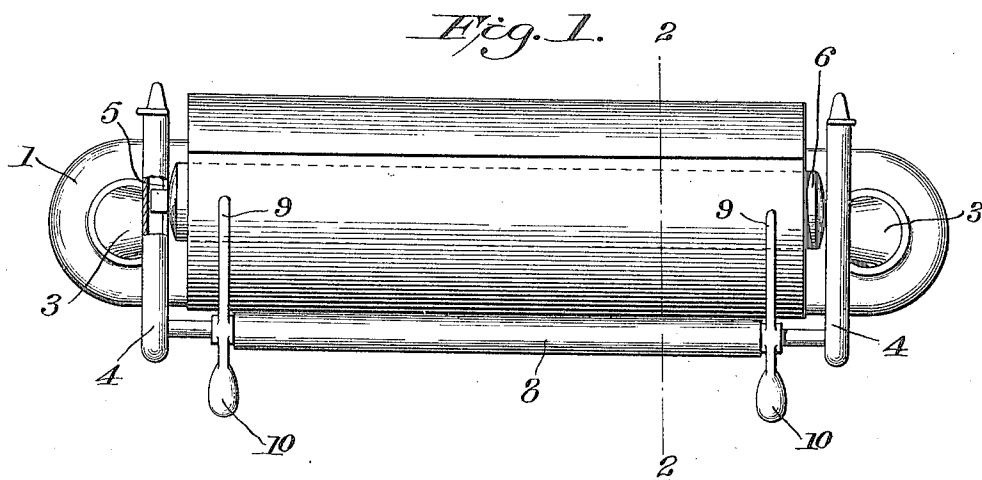


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 ROLL OF PAPER TOWELS OR THE LIKE AND METHOD OF MAKING THE SAME.  
 APPLICATION FILED MAR. 28, 1914.

1,141,229.

Patented June 1, 1915.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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ROLL OF PAPER TOWELS OR THE LIKE AND METHOD OF MAKING THE SAME.

1,141,229.

Specification of Letters Patent.

Patented June 1, 1915.

Application filed March 28, 1914. Serial No. 828,020.

*To all whom it may concern:*

Be it known that I, CHARLES B. BUERGER, a citizen of the United States, and resident of the city, county, and State of New York, have invented certain new and useful Improvements in Rolls of Paper Towels or the like and Methods of Making the Same, of which the following is a specification.

This invention has particular reference to dispensing paper towels and it has been my object to devise simple and efficient means by which a person using the paper towels may draw off a towel of definite length with ease and certainty.

It is a well known fact that paper towels are now usually made in a long strip wound into a roll and the user unwinds the amount desired and tears it off, but in such devices the user usually gets either too much or too little of the towel because the roll unwinds too easily or offers too much resistance and the result is in almost every instance the user gets more paper than necessary. This results in much waste.

According to my invention I wind a series of separate paper towels cut to the proper length on a single roll and each towel is drawn off separately and consequently the user gets no more and no less paper than necessary. I am enabled to get the desired results by the method of winding indicated hereinafter and by the dispensing means shown in the accompanying drawings.

In the drawings, Figure 1 is a front view of an apparatus embodying my invention; Fig. 2 is a cross section on the line 2—2 of Fig. 1; and Fig. 3 is a detail sectional view of the core and paper winding showing the method of overlapping and winding the towels.

The apparatus used in dispensing the towels may consist of any usual supporting frame such as the plate 1 which may be secured to a wall by means of screws 2 or other suitable fastening means and this plate has projecting from it at its ends the bars 3 which carry at their outer ends the vertical standards 4 which have on their inner faces the grooves 5. A wooden shaft 6 has its ends cut with parallel sides or squared to fit in the grooves 5 so that the shaft may freely move vertically but can not turn. A cylindrical cardboard hollow core 7 fits on the shaft 6 and is adapted to

turn thereon and the paper towels are wound on this core. For a purpose hereinafter explained a roller which may be a cylindrical rod 8 is mounted to turn in the lower ends of the standards 4 below the roll of paper towels and that roll of paper towels rests on this roller by gravity. It will be observed that the friction between the shaft 6 and the hollow cardboard core 7 will furnish resistance to the unwinding of the towels from the roll. I may, if desired, make use of fingers 9 projecting up in front of the roll of towels resting against the roll near the center, these fingers being mounted on the same shaft as the rod 8 and having weights 10 below the rod tending to yieldingly hold the ends of the fingers in contact with the roll of towels. These fingers may be used for the purpose of holding the free end of each towel in place on the roll as it is being unwound.

The principal difficulty in making use of separate towels wound into a single roll I found to be in the means for winding the towels into the roll in such way that they could be properly unwound. If each succeeding towel was placed on top of those that preceded it in the act of winding it on the roll, the operation was quite difficult and expensive because it was necessary to catch and carry around the roll the free end of each new towel added to the roll. In experimenting with this matter I found that if after one towel had been wound on the core in which there was only a few inches left unwound, the next succeeding sheet was placed with its end resting on that unwound end on the side next to the wound portion of the roll, the operation could be continued without the necessity of grasping the end of the new towel to pass it around the roll. In other words, it would be gripped between the free end of the preceding towel and the roll itself and would thus be carried around automatically as the roll was turned. It would seem at first glance that this would leave each succeeding towel with its end caught in between the preceding towel and the roll so that there would be difficulty in removing it when unwinding the towels. This however was found not to be the fact since the towels each in unwinding comes off from the outside of the roll with perfect freedom, and at the same time leaves the end of the succeeding towel on the roll project-

ing or hanging down from the front of the roll where it can be easily caught by the user and drawn off. In Fig. 3 I have shown the roll of towels with one towel 11 wound on the roll up to a point near its end and the succeeding towel 12 placed with its end overlapping the end of towel 11 ready to be passed forward around the roll simply by a further rolling movement of the roll.

10 In using towels twenty four inches long wound into a roll of about five or five and a half inches in diameter, I have found it advisable to overlap the ends of the towels about two inches but it will of course be understood that the invention is not limited to any particular size or to any particular amount of overlap. With a two inch overlap it will be seen that in the complete roll each towel will lie against the preceding towel throughout the circumference of the roll and for two inches additional.

In using the device or unwinding the towels the free end of the towel projecting over the roll at the top is grasped by the user and pulled forward or downward turning the roll and unwinding the desired towel. When in the act of unwinding, the overlapped end of the succeeding towel passes the top of the roll and is no longer confined by a layer of the preceding towel. It will not pass in between the roll of towels and the roller 8 since there is nothing which serves to direct or guide it into that position and it will therefore hang down by gravity in front of the roll of towels over the fingers 9 and under the towel which is being drawn off. When, therefore, the first towel is completely drawn off, the next towel has a projecting end in position to be grasped by the user.

40 The roller 8 serves to retain each towel in position on the roll until the end of the towel in unwinding passes that roller. It presses the outer layer of the towel against the roll of towels causing enough friction to make the roll of towels rotate in unwinding until

the end of the towel passes the roller 8. After the end passes that roller there is no further rotation and the towel is simply drawn off from over the stationary roll of towels. The arrangement of this roller 8 and the amount of overlap in succeeding towels therefore determines how much of the succeeding towel will be left hanging down ready to be grasped. I prefer to leave a free end of about six inches.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. As an article of manufacture, a core having wound thereon a series of separate detached sheets of paper such as paper towels the outer end of each sheet overlapping and being on the outside of the inner end of the succeeding sheet.

2. The method of winding detached sheets of paper such as paper towels in a roll which consists in winding a sheet on a core until only a few inches of the sheet at the end remain unwound, placing the end of a second sheet between the unwound end of said first sheet and the body of the roll whereby the outer end of the first sheet overlaps the inner end of the succeeding sheet, continuing the winding of the new sheet and the overlapped end of the first sheet until the winding of the second sheet is almost completed and then continuing the same operation with succeeding sheets.

3. As a new article of manufacture, a package comprising a series of separate detached articles wound in a roll, the outer end of each article overlapping and being on the outside of the inner end of the succeeding article.

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

CHARLES B. BUERGER.

Witnesses:

G. H. BELL,  
ROBT. C. WHEELER.