(No Model.)

S. WHEELER.

PAPER ROLL HOLDER.

No. 438,457. Patented Oct. 14, 1890.

Fig. 1.

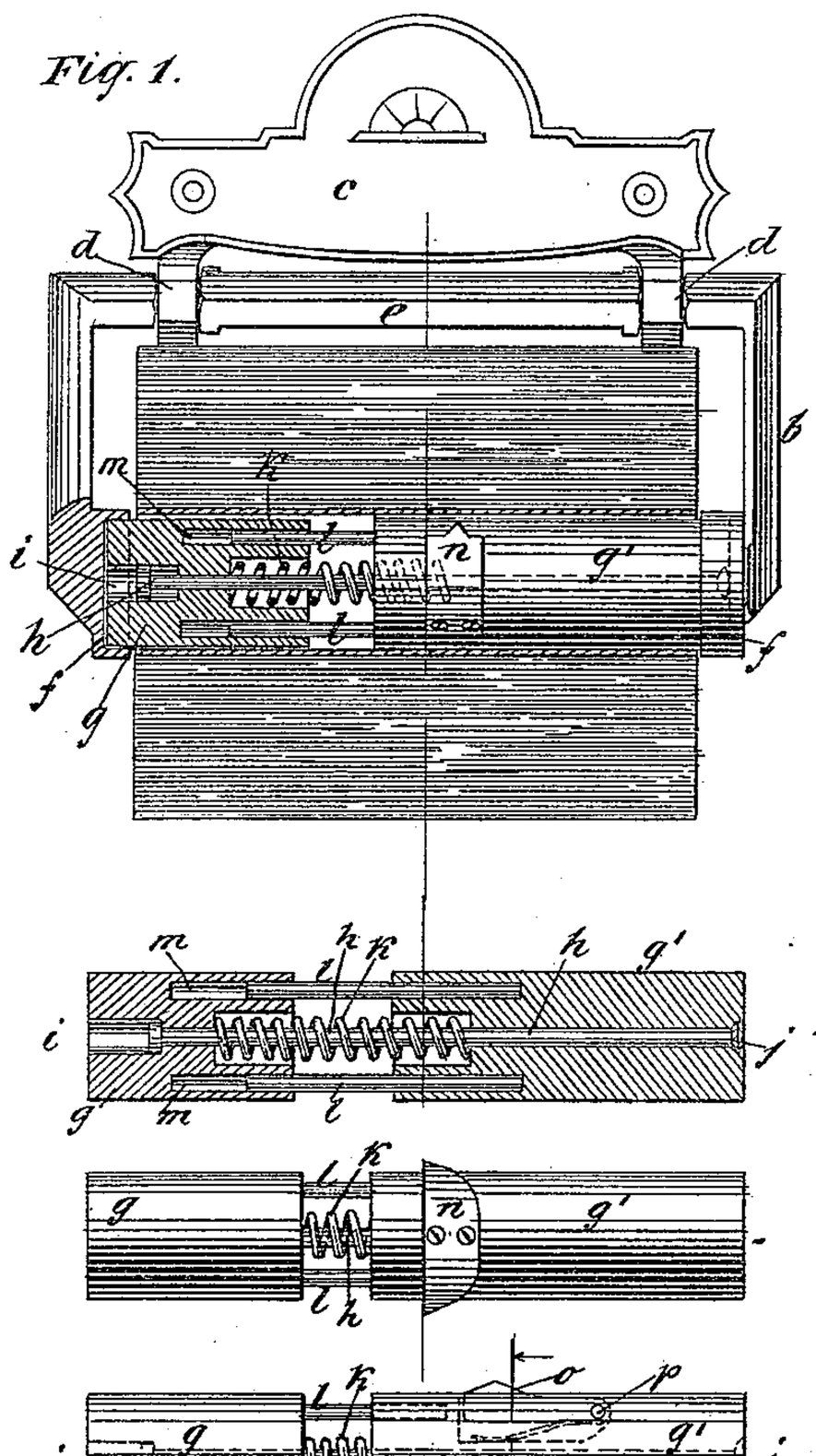


Fig. 2.

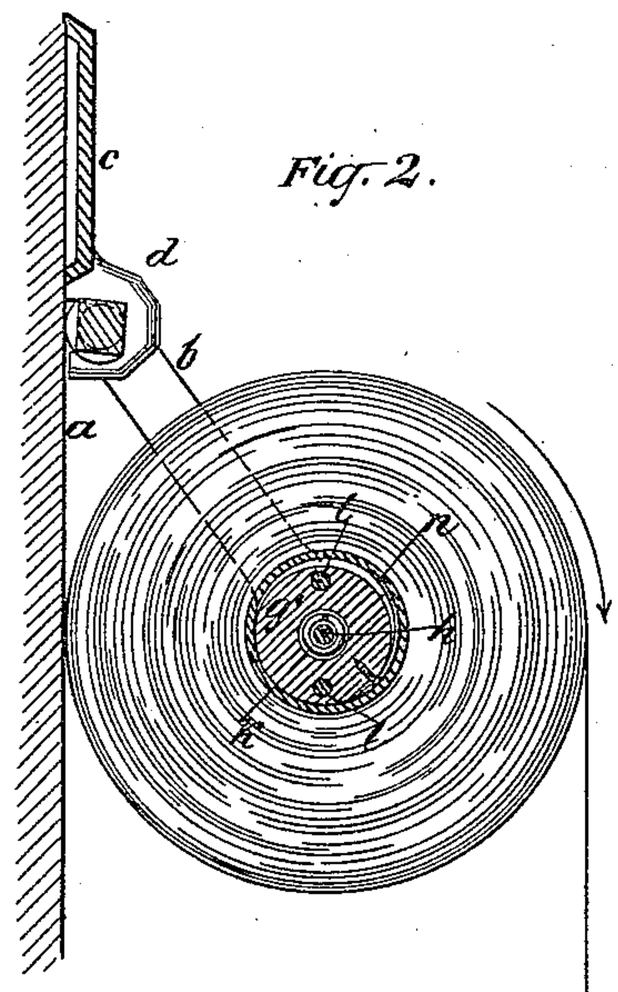


Fig. 3.

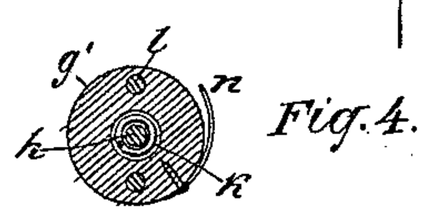


Fig. 4.

Fig. 5.

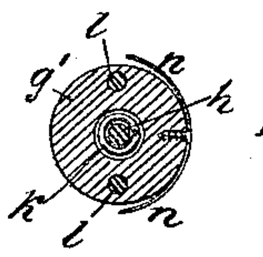


Fig. 6.

Fig. 7.

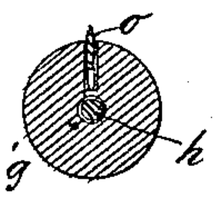


Fig. 8.

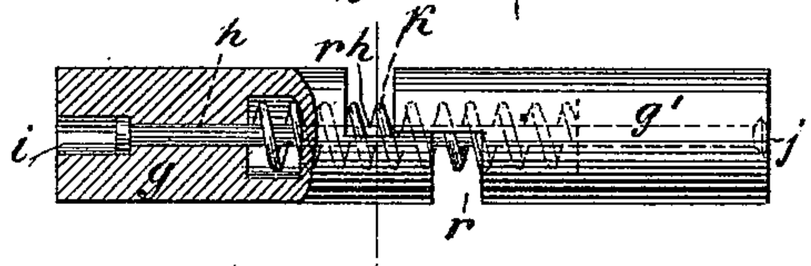


Fig. 9.

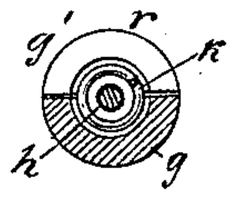


Fig. 10.

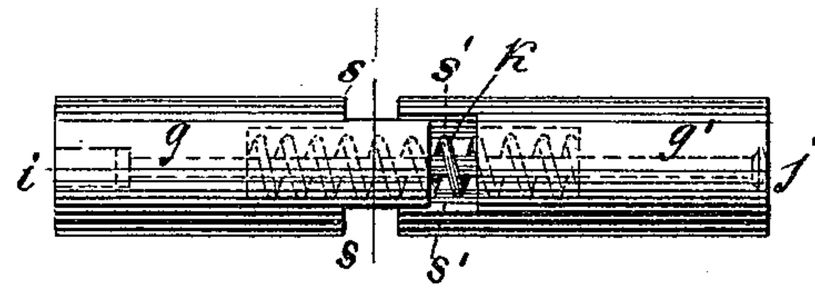


Fig. 11.

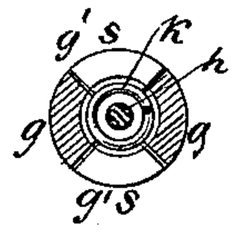
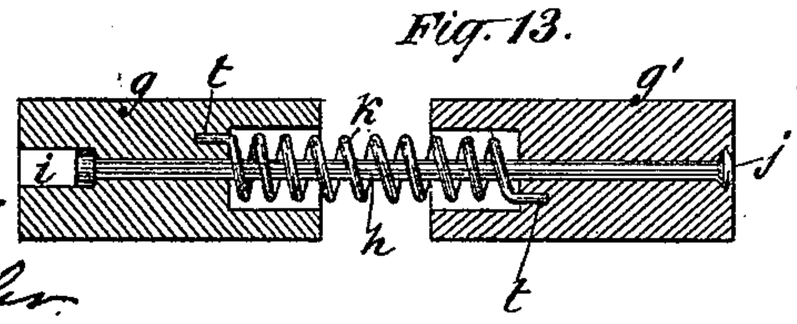


Fig. 12.

Fig. 13.



WITNESSES:

INVENTOR

Scott Wheeler

UNITED STATES PATENT OFFICE

SETH WHEELER, OF ALBANY, NEW YORK.

PAPER-ROLL HOLDER.

SPECIFICATION forming part of Letters Patent No. 438,457, dated October 14, 1890.

Application filed July 11, 1890. Serial No. 358,447. (No model.)

To all whom it may concern:

Be it known that I, SETH WHEELER, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Paper-Roll Holders, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

This invention relates to improved means of applying friction to the roll of paper at its center; also, to improved means for locking the roll of paper to the holder, whereby the sheets of paper forming the roll can be removed singly and the removal of the entire roll bodily prevented.

It consists, first, in the combination of a roller with a roll of paper and means for uniting such roller and roll of paper to each other, so that they will move in unison; second, in the combination of a roll of paper and a movable roller with means for uniting and retarding the movement of the same; third, in a roller for holding a roll of paper constructed in sections, so that such roller will have end friction when between the arms or brackets supporting it, to prevent the roll of paper from unwinding except when pulled by the hand, or its removal bodily from the holder; fourth, in a roller for holding a roll of paper constructed in sections, so that it will have end friction between the arms or brackets supporting it, in combination with means for uniting such roller to a roll of paper, so that such roller and roll of paper will move in unison.

It further consists in certain details of construction, hereinafter more specifically described and claimed.

In the drawings, Figure 1 represents a front view of a fixture to which my invention is applied. Fig. 2 is a longitudinal section thereof, taken in the line X X of Fig. 1. Fig. 3 is a side view of the roller upon which the roll of paper is held. Fig. 4 is a cross-section of such roller, taken in the line Y Y of Fig. 3. Figs. 5 and 6 is a modification of the roller shown in the preceding figures, so far as the device causing engagement with the roll of paper is concerned. Figs. 7 and 8 is another modification of this device so causing engagement. Figs. 9, 10, 11, and 12 are modifications of the roller, showing different ways of constructing its sections where such sections are united together. Fig. 13 is still another modification, showing a different way of holding these sections together.

a is the back of the fixture for securing it to the wall by screws.

b b are two swinging arms secured to the back by a plate *c*, containing two eyes *d d*, through which the cross-rods *e* of the arms pass and are held as in sockets. At the outer ends of these arms *b b*, facing inwardly, are two cup-shaped sockets *f f*, each of the size in diameter of the ends of the sectional roller *g g'*, placed between the arms and supporting the roll of paper. These sections are bored out centrally from end to end, so as to contain a rod *h*, having a head on each of its ends. In one of these sections *g* the diameter of this bored-out portion is a little greater, so as to conform to one of these heads, as seen at *i*. In the other section of the roller the head of the rod rests in a recess just large enough to contain it, as seen at *j*, but not admitting of any motion of the rod through the roller, as is the case in the section *g*. The inner ends of these sections are also bored out centrally large enough to contain a spiral spring *k*. The two sections are prevented from turning independently of one another by two rods *l l*, rigidly fastened in section *g'*, but having longitudinal play in the recesses *m m* of section *g*. From this it will be apparent that after the roll of paper is placed on the roller the roller can be inserted in the arms *b b*, the section *g* yielding sufficiently for the purpose, and after the ends are secured within the two cup-shaped sockets *f f* the section *g* cannot be again reached by the fingers so as to press it back upon the section *g'* in order to release the roller until after all of the paper is withdrawn from the roll. The ends of the roller fitting snugly within these cup-shaped sockets and the outward pressure of the end of the section *g* caused by the spring *k* will force the ends of the roller against the bottom of the sockets, thus giving enough friction to prevent the roll of paper turning too freely between the arms *b b*.

n is a spring attached at one end to the periphery and beveled at its free end to engage with the inner portion of the roll of paper, so that upon pulling upon the end of the web of pa-

per the roll of paper and roller will move in unison, thus preventing withdrawal of a number of sheets at one pull upon the web by reason of the roll of paper slipping around upon the roller and thereby avoiding the friction placed, as above stated, upon its ends. In Figs. 3, 4, 5, and 6 it will be seen that this spring is made double, having two free ends, these ends facing in opposite directions, so that in whichever way the roller is inserted between the arms *b b* the roll of paper and the roller will turn together.

In Figs. 7 and 8 I rivet into a recess made in the periphery of the section *g'* a short lever *o*, with its upper edge sharpened. Underneath this lever is a knife-spring *p*, which will tend to throw up the lever *o* after the roll of paper has been slipped onto the roller, and thus making contact between the roll of paper and roller, so as to cause them to move together in either direction.

In Figs. 9 and 10 there is shown another construction for a connection between the sections *g* and *g'* of the roller. The inner ends are undercut, so as to interlock, as shown at *r r'*, thus permitting of a longitudinal movement of the section *g* upon the section *g'* without either section turning independently of the other. In other respects the sections are constructed as explained above with reference to the other figures already mentioned.

In Figs. 11 and 12 the construction is still further modified from that shown in Figs. 9 and 10, in that there are four interlocking ends *s s' s s'* instead of two.

In Fig. 13 the ends *t t'* of the spring *k* are embedded in the sections *g g'*, and thus the sections are prevented from turning independently of one another. The construction of the parts is otherwise the same as explained with reference to the rollers shown in the other figures.

The roll of paper used in this holder may have its web either perforated, indented, or weakened in any other manner. I prefer, however, to use a paper the web of which is weakened by perforations or indentations.

In the operation of this holder a pull upon the free end of the web will bring into play the roll of paper, it and its contained roller moving together, the friction of the ends of the roller causing a strain or tension upon the paper, and on the pull being continued when a sheet of paper is unrolled the line of weakness in the web will cause it to separate, and the roll and roller are then at rest. Thus one hand only need be employed to withdraw a sheet, and excessive unrolling of the roll of paper is prevented.

While I have described my invention as applied to the common form of holder with swinging arms, it is equally adapted to holders with rigid arms or brackets, and the construction shown is especially adapted for use in what are termed "lock-holders," in which the roll of paper cannot be removed from the holder. Where this is not desired the sectional roller may be dispensed with, and a simple roller provided with means to engage the roll of paper substituted. Friction may be applied to this roller by means of a bolt passing through the roller and arms of the holder and provided with a nut to compress it longitudinally, or friction may be applied to the periphery of one or both the projecting ends of the roller. I do not confine my invention to the specific means shown, as it is obvious that the resistance necessary to control the movement of the roller may be applied in many ways. The first part of the invention—namely, the application of friction to the roll of paper at its center—can be used with a roller constructed in either one or more sections. If made in one piece, then the roller is inserted and held in the roll-holder, as shown in the drawings of an application contemporaneously filed herewith.

I claim—

1. In a paper-holder, the combination of a roller with a roll of paper, and a spring *n* for engaging them with each other, so that they will move together, substantially as described.

2. In a paper-holder, the combination of a roll of paper with a roller with which it moves in unison, and cup-shaped sockets *f f* for retarding the movement of the roller, substantially as described.

3. In a paper-holder, a roller for holding a roll of paper constructed in sections, so that it will have end friction between the arms in which it is placed, so as to prevent the roll of paper from unwinding except when pulled by the hand, substantially as described.

4. In a paper-holder, a roller for holding a roll of paper constructed in sections, so that it will have end friction between arms in which it may be placed, in combination with means for retaining such roller to a roll of paper, so that such roller and roll of paper will move together, substantially as described.

5. In a paper-holder, a roller composed of sections *g g'*, in combination with means for preventing the sections from turning independently of one another, and means for permitting them to yield longitudinally so as to secure them between the arms *b b* of the holder, substantially as described.

6. In a paper-holder, the arms *b b*, in combination with a roller composed of sections *g g'*, means for preventing said sections from turning independently of one another, and means for permitting them to yield longitudinally in order to secure them within said arms, substantially as described.

7. In a paper-holder, the arms *b b*, in combination with a roller composed of sections *g g'*, means for preventing said sections from turning independently of one another, means for permitting them to yield longitudinally in order to secure them within said arms, and means for retaining such roller to a roll of paper so that such roll of paper and roller will move together, substantially as described.

8. In a paper-holder, a roller composed of

sections secured to each other to enable them to turn always in the same direction and in unison, and having motion in a longitudinal direction in order to permit them to be secured within the arms of the holder, in combination with means for causing the roller and roll of paper placed on such roller to move together, substantially as described.

9. In a paper-holder, the arms *b b*, containing two cup-shaped sockets *f f*, in combination with a roller composed of sections *g g'*, secured together by means for preventing the sections from turning independently of each other, and having means for giving the sections a longitudinal movement for inserting the outer ends of the sections within said cup-shaped sockets, and with means for securing together the roller and roll of paper contained thereon so that such roller and roll of paper will move together, substantially as described.

10. In a paper-holder, the arms *b b*, containing two cup-shaped sockets *f f*, in combination with a roller composed of sections *g g'*, a spiral spring *k*, and rod *h*, placed intermediate said sections, rods *l l*, securing said sections together at their inner ends, and a flat spring *n*, secured to the periphery of the roller for engaging with the roll of paper, substantially as described.

SETH WHEELER.

Witnesses:
WM. A. WHEELER,
G. J. WHEELER.