(No Model.)

S. P. DENISON.

PAPER FASTENER.

No. 487,440. Patented Dec. 6, 1892.

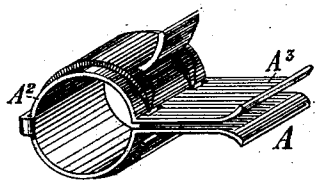

Fig. 1

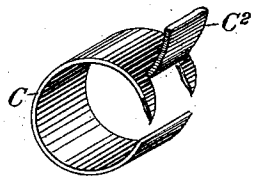

Fig. 6

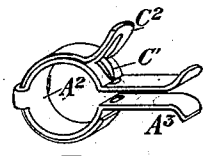

Fig. 2

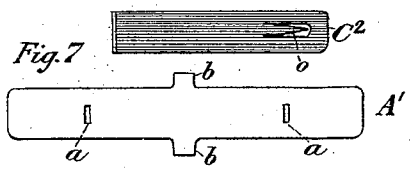

Fig. 7

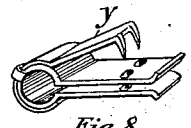

Fig. 8

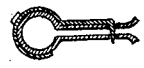

Fig. 9

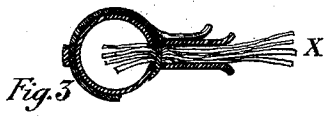

Fig. 3

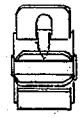

Fig. 5

Fig. 4

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PAPER-FASTENER.

SPECIFICATION forming part of Letters Patent No. 487,440, dated December 6, 1892.

Application filed March 4, 1891. Serial No. 383,702. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER P. DENISON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Paper-Fasteners, of which the following is a specification.

The object of my invention is to provide a convenient, simple, and durable fastener for either permanently or temporarily fastening together sheets of manuscript, bills, &c.

With the various forms of paper-fasteners now in use—such, for instance, as the well-known McGill fastener or the eyelet-fastener—it is first necessary to perforate the papers to be secured together and then apply the fastener and fix it in place.

My improved device may be readily applied to the edges of the sheets of paper and then by one motion the paper is perforated and the sheets bound together.

In general terms the invention includes a clip that is slipped over and embraces the edges of the sheets of paper and a perforating and fastening or retaining device that is hinged on or turns upon a bearing on the clip and perforates the papers when it is turned upon its bearing and retains or fastens the sheets of paper together.

The details of the invention are more fully hereinafter described.

In the accompanying drawings, Figures 1 and 2 are respectively perspective views of two forms of my improved device; Fig. 3, a side elevation, partly in section, showing a number of sheets of paper secured therein; Fig. 4, a rear end view; Fig. 5, a front view; Fig. 6, a perspective view of the hinged or rotating perforating and retaining device. Fig. 7 shows the blanks from which the hinged or rotating perforating device having a single pin, as in Fig. 2, and the clip which embraces the paper and on which the perforating device is mounted are made. Fig. 8 is a perspective view, and Fig. 9 a sectional view, of a modified form of the device.

In each instance I employ a clip A, that embraces the edges of the paper sheets and has apertures, through which the perforating and retaining pin passes. The particular form of clip which I prefer to employ and which I have illustrated in the several figures is made from the blank A′, Fig. 7. This blank is of the general outline shown in the drawings and is formed with apertures *a a* and at its center with a projecting lip *b* on each side. The central part of the clip is then bent into cylindrical form, as shown at A^3 in the several figures. The end portions A^3 then abut against each other and are flared away from each other slightly at their extreme ends. The apertures *a* in the two flat ends of the clip coincide with each other, so that when a number of sheets of paper are inserted into the clip a pin passed through these apertures will perforate the paper and retain it in place.

The particular form of perforating and retaining device which I have illustrated consists of a cylindrical shell C. This shell may be bent up from the blank C′, Fig. 7. It is punched out, as seen at *c*, so that when its end C^2 is turned out, as seen in Fig. 2, there will be a sharp-pointed pin *c′*, curved in line with the curve of the shell. The shell is slipped laterally over the cylindrical part of the clip and the lips *b* on the clip are turned over, as shown, to hold it in place. The apertures *a* in the clip are then in the path of the pin when the shell is partially rotated on the clip.

The device made as above described is seen in Fig. 2. When sheets of paper X are inserted into the clip, as seen in Fig. 3, by pressing down upon the end C^2 of the shell the shell turns upon the cylindrical portion of the clip. The pin passes through the apertures in the flat lips of the clip and through the intervening sheets of paper, thus perforating them and fastening them in place. The shell is held in position by friction, and the papers may only be released by exerting a positive strain upon the part C^2 of the shell to turn it on its bearing and raise the pin out of the perforations in the lips of the clip to permit the removal of the paper.

The device shown in Figs. 1 and 6 has two sets of coinciding apertures *a* in the lips of the clip and two perforating-pins on the shell. These pins are formed by slitting the blank for the shell near each side at one end and then turning up the part C^2 to form the thumb-piece by which the shell is rocked on its bearing

on the clip. The double pins are desirable because they prevent any lateral swinging or rocking of the paper in the fastenings.

With a fastening of this character from twenty to thirty sheets of manuscript of ordinarily-heavy paper may be fastened together by a reasonable pressure of the thumb upon the projecting portion C^2.

The device may serve as a permanent fastening, but is also especially useful as a temporary fastener for files of bills, receipts, letters, &c., because merely by rolling the shell upon the clip the papers may be released and one or more of them removed at pleasure, and they may again with equal facility be replaced. When the part C^2 is pressed down to secure the papers, it lies flat against the upper lip A^3 of the clip and is entirely out of the way. The parts may be made of any desired material. The clip, for instance, may be of brass; but the shell would preferably be made of sheet-steel, so that the points of the pins c' may have sufficient keenness and retain their sharpness. The clip would preferably be made so that the lips A^3 would elastically grip the papers inserted between them.

The special construction described is that which I prefer and consider most desirable; but it may of course be modified, and as an illustration of the manner in which changes may be made I have illustrated another form of fastener in Figs. 8 and 9. In this form the clip is of the same construction already described, except that the coinciding apertures a are farther removed from the cylindrical portion of the clip. The shell, however, is formed with a straight flat projecting portion y, which is formed at the end with a perforating pin or pins, two such pins being shown in the drawings. When the part y is pressed down, the shell turns upon the clip. The pins pass through the apertures a, thus perforating the intervening sheets of paper and retaining them in place. With this construction, however, the points of the pins may project from the under face of the lower lip of the clip, and where papers are permanently fastened together the projecting ends of the pins may be bent down against the face of the clip.

However constructed, my invention involves the general feature mentioned at the beginning of this specification—namely, a clip that embraces the edges of the paper and a perforating and retaining pin that turns upon or is hinged on the clip.

I claim as my invention—

1. The combination of a clip having a cylindrical portion A^2 and adjacent flat lips A^3 with coincident apertures therein, a shell mounted upon and turning on the cylindrical portion of the clip, and a perforating and paper-retaining pin carried by the shell and adapted to pass through the coincident openings in the lips of the clip and the thumb-piece C^2 of the shell.

2. The combination of the clip having a cylindrical portion and adjacent flat lips with coincident apertures therein, a shell mounted upon and turning on the cylindrical portion of the clip, the paper perforating and retaining pin carried by the shell, and the lips b for retaining the shell in place.

3. The combination of a clip having a head or enlarged portion A^2 and flat lips A^3 extending therefrom for embracing the sheets of paper, said lips having coincident apertures therein, and a hinged part mounted on the head and having a perforating and retaining pin adapted to pass through said apertures, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

SYLVESTER P. DENISON.

Witnesses:

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EDWARD C. DAVIDSON.