(No Model.) 3 Sheets—Sheet 1.

M. L. SEVERY.

PLATEN FOR PRINTING PRESSES OR THE LIKE.

No. 549,691. Patented Nov. 12, 1895.

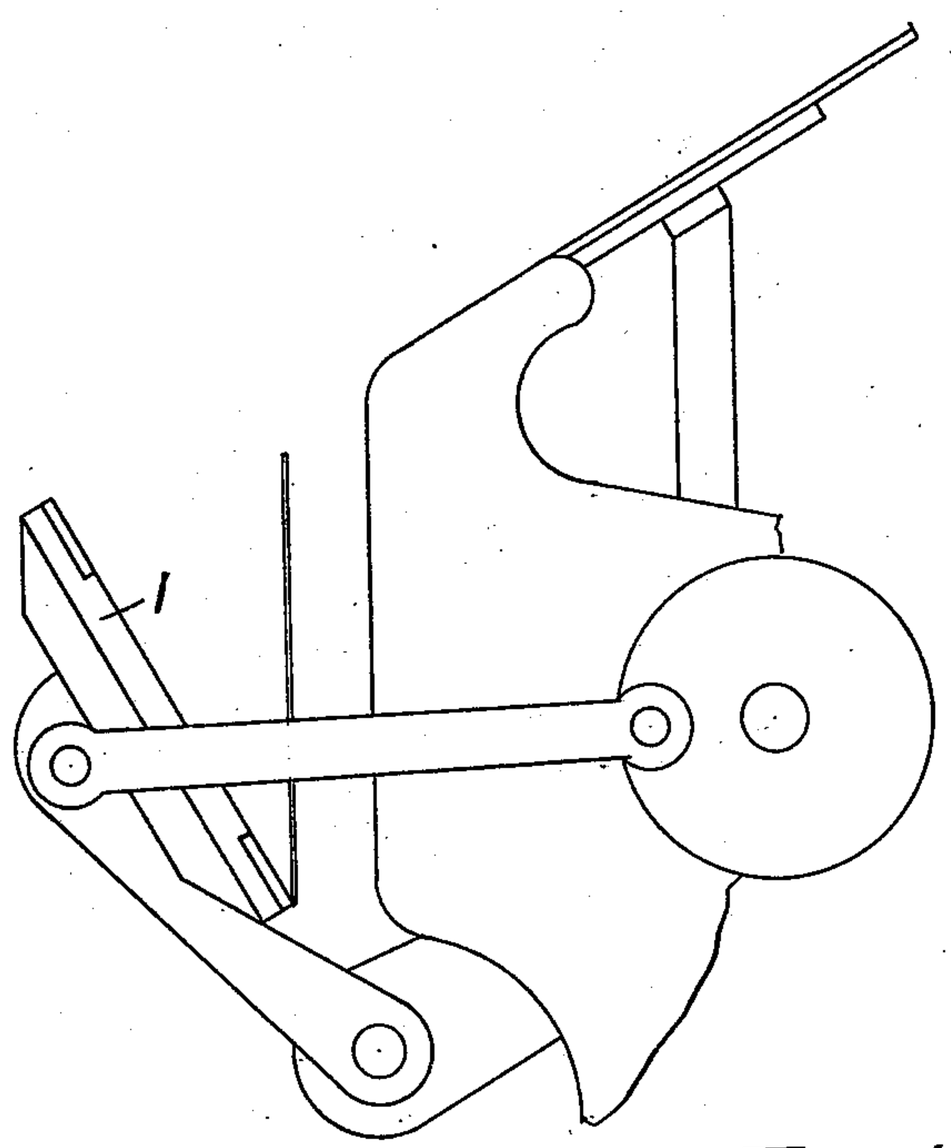

Fig. 1.

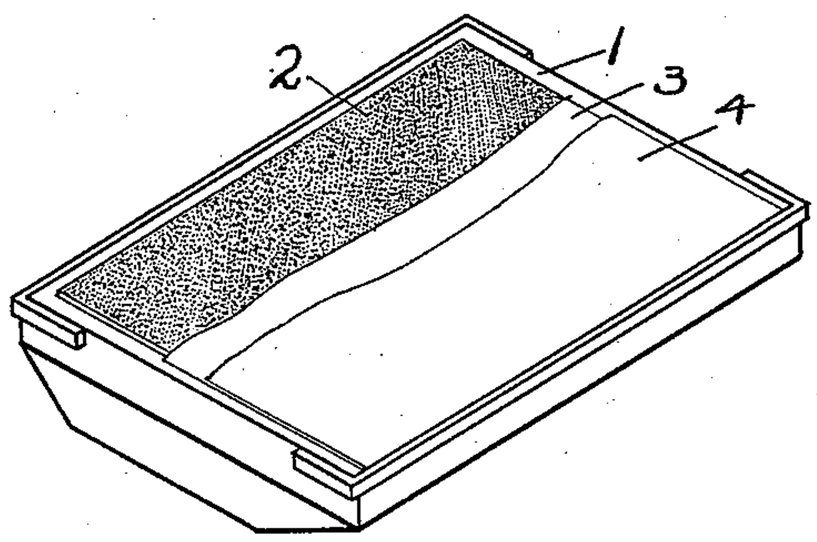

Fig. 2.

Witnesses.
Frank W. Reynolds
Edward D. Wood

Inventor.
Melvin L. Severy.
by Howe & Kellogg,
Attorneys.

(No Model.) 3 Sheets—Sheet 2.

M. L. SEVERY.

PLATEN FOR PRINTING PRESSES OR THE LIKE.

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Fig. 3.

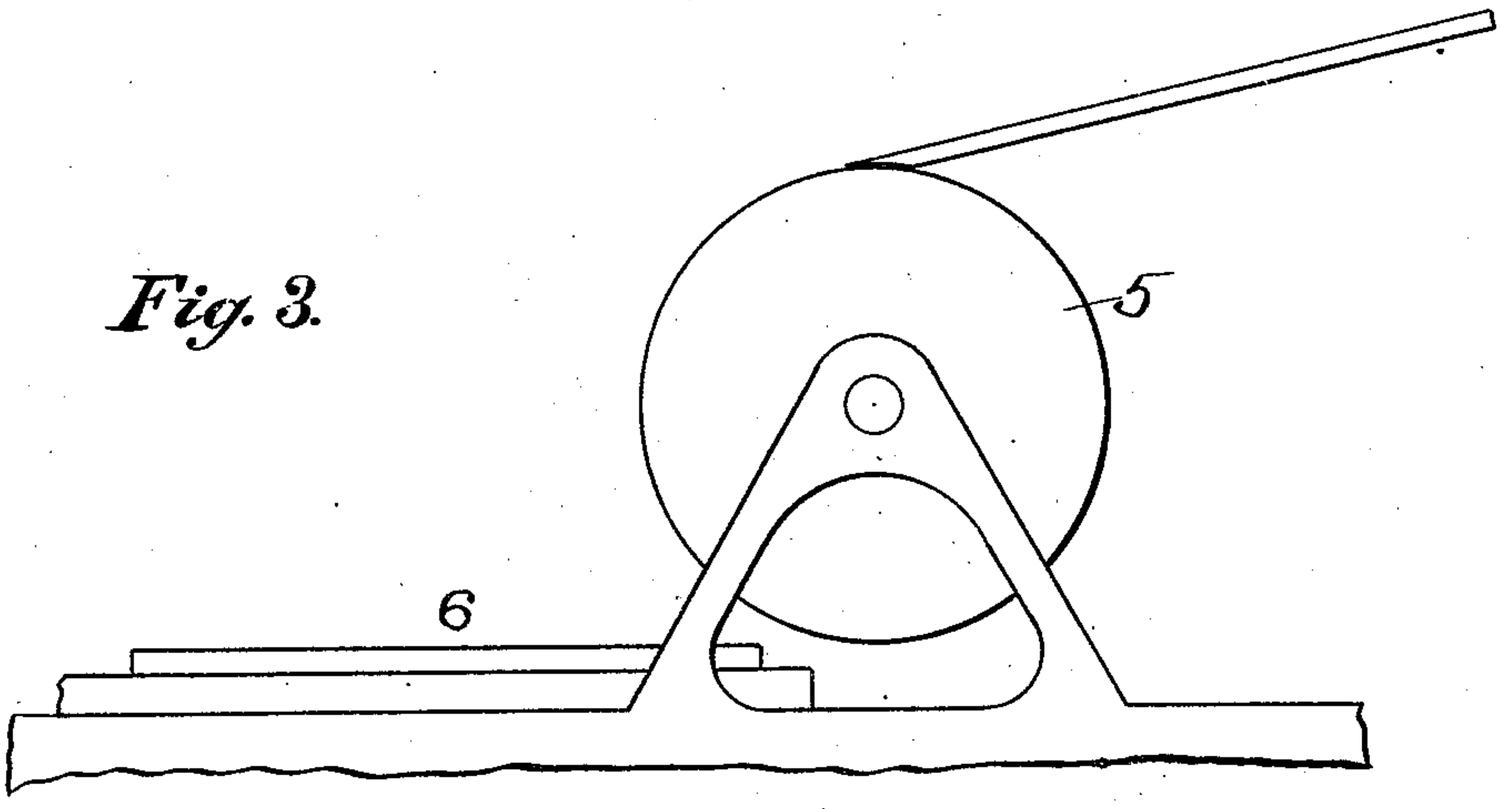


Fig. 4.

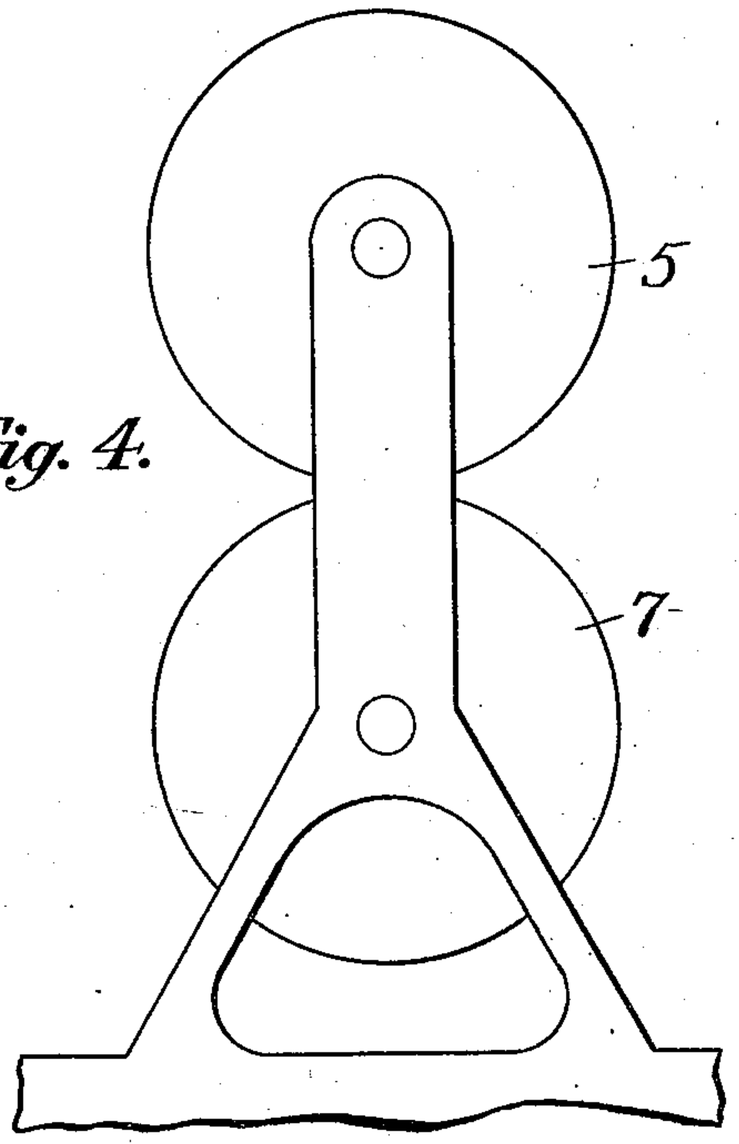


Fig. 5.

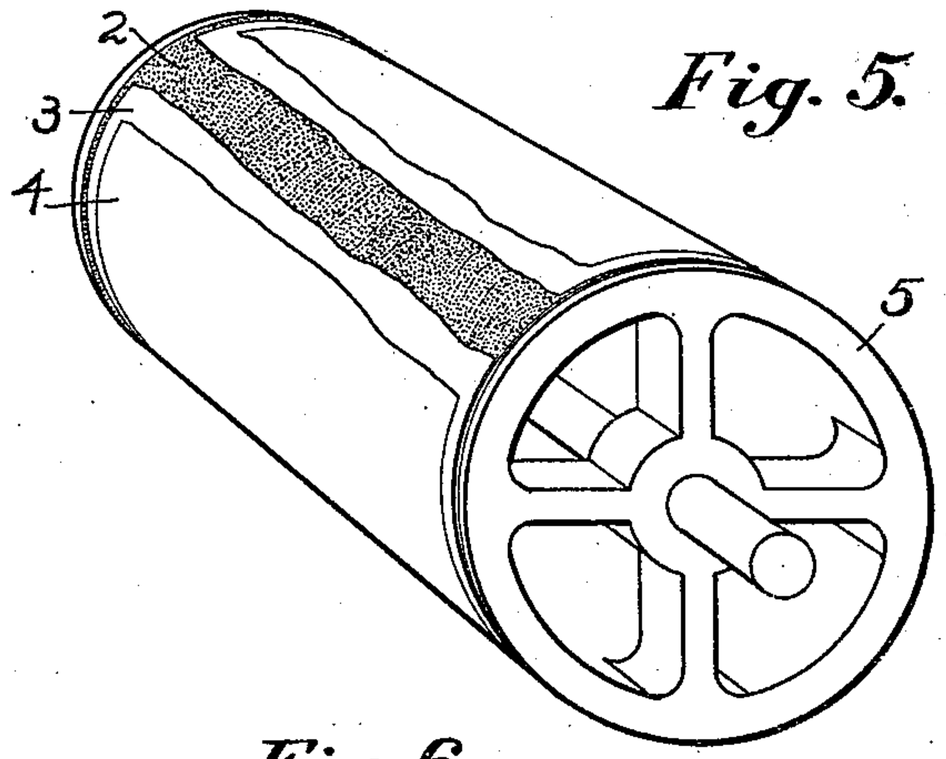
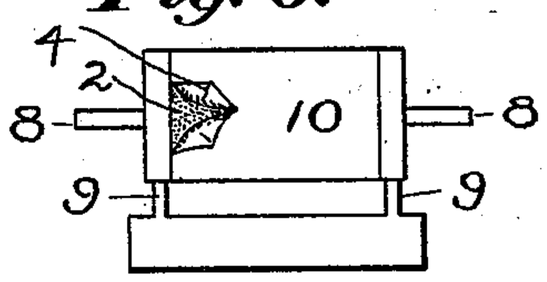


Fig. 6.



Witnesses.
Frank H. Reynolds.
Edward D. Hood

Inventor.
Melvin L. Severy,
by Howe & Kellogg.
Attorneys.

ANDREW B. GRAHAM. PHOTO-LITHO. WASHINGTON, D.C.

(No Model.)

3 Sheets—Sheet 3.

M. L. SEVERY.

PLATEN FOR PRINTING PRESSES OR THE LIKE.

No. 549,691. Patented Nov. 12, 1895.

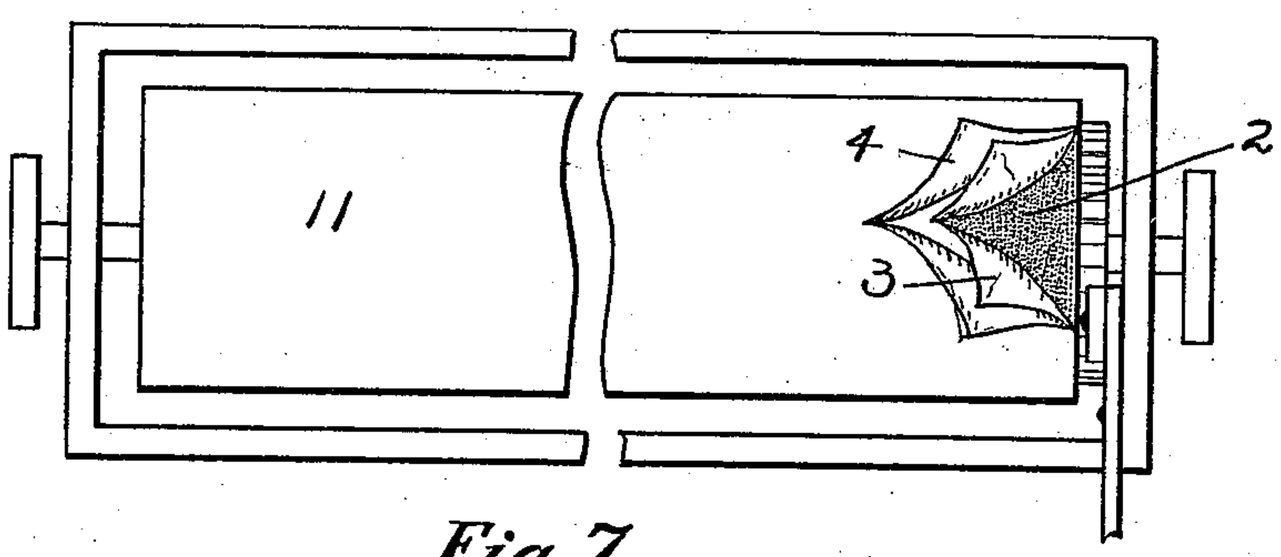


Fig. 7.

Fig. 8.

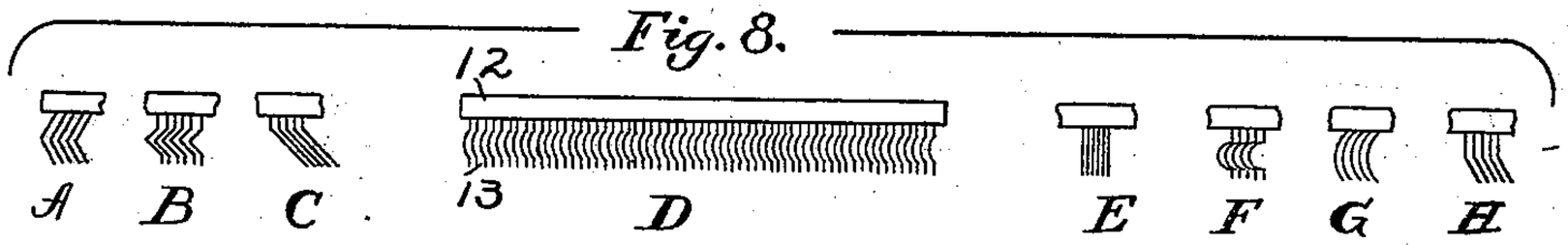
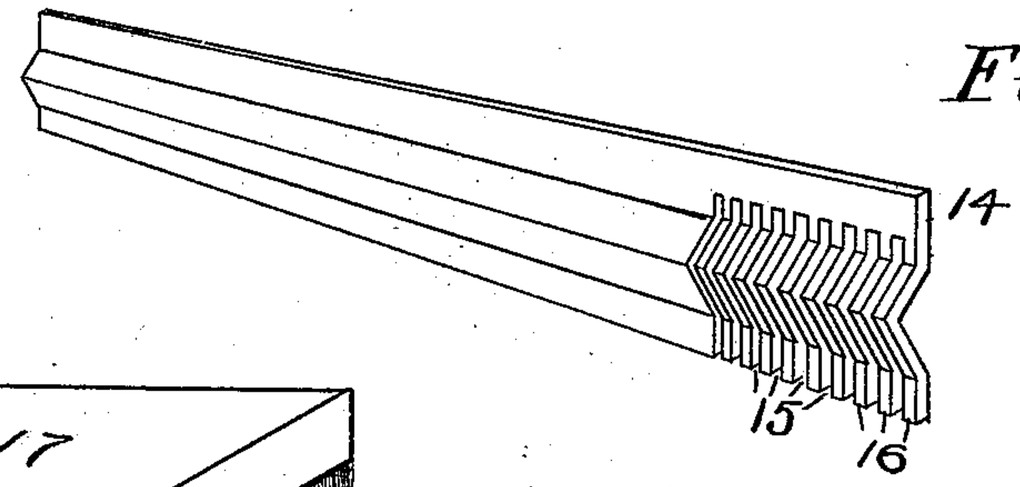


Fig. 9.



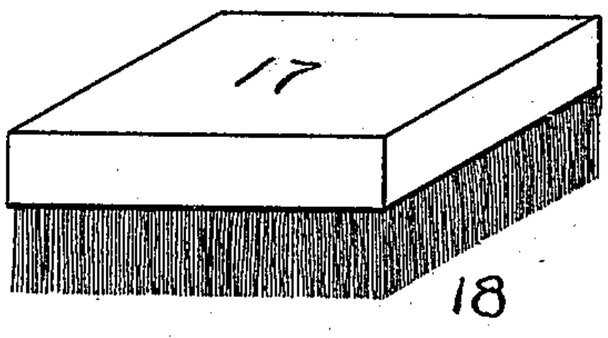


Fig. 10.

Witnesses.
Frank H Reynolds
Edward P Wood

Inventor.
Melvin L. Severy,
by Howt Kellogg.
Attorneys.

ANDREW B. GRAHAM, PHOTO-LITHO. WASHINGTON, D.C.

UNITED STATES PATENT OFFICE.

MELVIN L. SEVERY, OF BOSTON, MASSACHUSETTS.

PLATEN FOR PRINTING-PRESSES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 549,691, dated November 12, 1895.

Application filed June 17, 1895. Serial No. 553,120. (No model.)

To all whom it may concern:

Be it known that I, MELVIN L. SEVERY, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Platens for Printing-Presses or the Like, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to an improvement in platens for printing-presses and the like, and has for its object the production of a uniform impression without the necessity of the "make-ready" or previous preparation of the platen, impression-cylinder, or type.

To this end the invention consists in providing under the covering of the platen, impression-cylinder, or their equivalents a surface or bed formed by the ends of a number of fixed, independently-yielding, and elastic wires or bristles, or their equivalents, arranged in close proximity to one another and smoothed off evenly, whereby a yielding surface is formed which accommodates itself to irregularities in the printing-surface and to varying thicknesses in different parts of the material upon which the impression is to be made.

The process known as the "make-ready" is rendered necessary by these irregularities in order to insure a uniform impression, and it consists in building up on the covering of the platen, impression-cylinder, or their equivalents those parts which are opposed to the parts of the form which are too light by pasting additional thicknesses of paper thereon or by pasting paper on the back of the form, so as to elevate the same, and when the parts of the form are too high in cutting out the opposed part of the covering of the platen or impression-cylinder in order to prevent the form from pricking through the paper. This operation requires time and skill, and is consequently expensive. It is also disadvantageous in that the paste which is used hardens and the type coming in contact with this hard and uneven surface is soon worn out.

Means which will obviate the necessity of the make-ready will largely diminish the cost of printing and save the cost of type. I accomplish this object by the device which in various forms and as applied to various presses and machines is represented in the accompanying drawings, in which—

Figure 1 is a side elevation of a part of a press. Fig. 2 is an isometric view of the platen detached and showing my improved platen-surface. Fig. 3 is a side elevation of a part of a flat-bed "cylinder-press." Fig. 4 is a side elevation of a part of a "perfecting-press," on which the printing is from a stereotyped form bent around a cylinder. Fig. 5 is a perspective view of a cylinder which may be used on either of the last two mentioned presses, and which is equivalent to the platen. Fig. 6 is a front elevation of a hand "proof-press." Fig. 7 is a plan view of the platen or roller used on a type-writer. Fig. 8 shows different forms of yielding wires which may be used to form the platen-surface. Fig. 9 illustrates another method of forming the yielding bed or surface, and Fig. 10 is an isometrical view of a bristle brush which may be used on the platen or impression-cylinder.

In the several figures like numerals refer to like parts.

I have shown these various forms of presses and machines for the purpose of illustrating the general applicability of my invention, which relates merely to the bed or surface of the platen, impression cylinder, or their equivalents and not to any part of the mechanism for actuating this platen or cylinder.

The surface which is formed by the independently-yielding bristles of an ordinary brush illustrates the nature of the surface which I use; but I do not limit myself to this particular means of producing it. A means which I have found satisfactory in actual practice consists in forming the surface by the ends of elastic wires 13, bent in various ways, as shown at A to H, inclusive, Fig. 8, and vertically fixed in a backing 12 of leather or other suitable material, the wires being in close proximity to one another and having their free ends ground off to form a perfectly flat surface. The finer the wires and the closer their proximity to one another the better will be the result attained. Fine "card-clothing," so called, illustrates the desired proximity of the wires and the evenness of the surface.

The several forms of wires shown in Fig. 8

may be used when different degrees of flexibility in the wires and corresponding variations in the yielding capacity of surface are desired. These variations in the yielding capacity of the surface may be necessitated by the varying nature of the form or of the material upon which the impression is to be made, and platens or cylinders having surfaces of different yielding capacity may be desirable in order to be prepared for all classes of work which may be called for, or means may be provided for applying surfaces of different yielding capacity to the platen or cylinder. The surface may also be formed from a series of bars of sheet-steel, each bent longitudinally near its middle and then sawed into teeth 16, with intervening spaces 15, and secured together by the backing 14 in a laminated form, a space being left between each sheet for the free movement of the teeth.

In Fig. 1 the platen is shown at 1, and in Fig. 2, 2 is the yielding surface, fixed to the platen in any suitable manner, and 3 and 4 are sheets of paper which are superimposed upon the surface, a part of these sheets being shown as broken away.

In Fig. 3, 6 is the form and 5 the impression-cylinder.

In Fig. 4, 5 is the impression-cylinder, and 7 is the cylinder carrying the form.

In Fig. 5 the impression-cylinder is shown as covered with the yielding surface 2, and 3 and 4 are sheets of paper covering the surface, part of each sheet being shown as broken away.

In Fig. 6, 9 is the form, 10 the cylinder to which material having the yielding surface is secured, and 4 is a sheet of paper covering the surface, shown as turned back, exposing a part of the surface.

In Fig. 7, 2 is the material with the yielding surface fixed on a type-writer roller. Two thicknesses of paper 3 4 are shown as covering this surface.

It is obvious that when an impression is made on a platen or impression-cylinder provided with material having a large number of independently-yielding surfaces the independent surfaces will accommodate themselves to the irregularities in the form or to the different degrees of thickness of the material to be printed, and that thus an impression of uniform character will be obtained without the usual make-ready.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A bed or surface for platens for printing presses and the like composed of a number of fixed, independently yielding, elastic bristles or wires, substantially as set forth.

2. A bed or surface for platens for printing presses and the like composed of a number of fixed, independently yielding, elastic bent wires or bristles, substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 8th day of June, A. D. 1895.

MELVIN L. SEVERY.

Witnesses:
CHAS. A. KELLOGG,
HORACE D. EVERETT.