

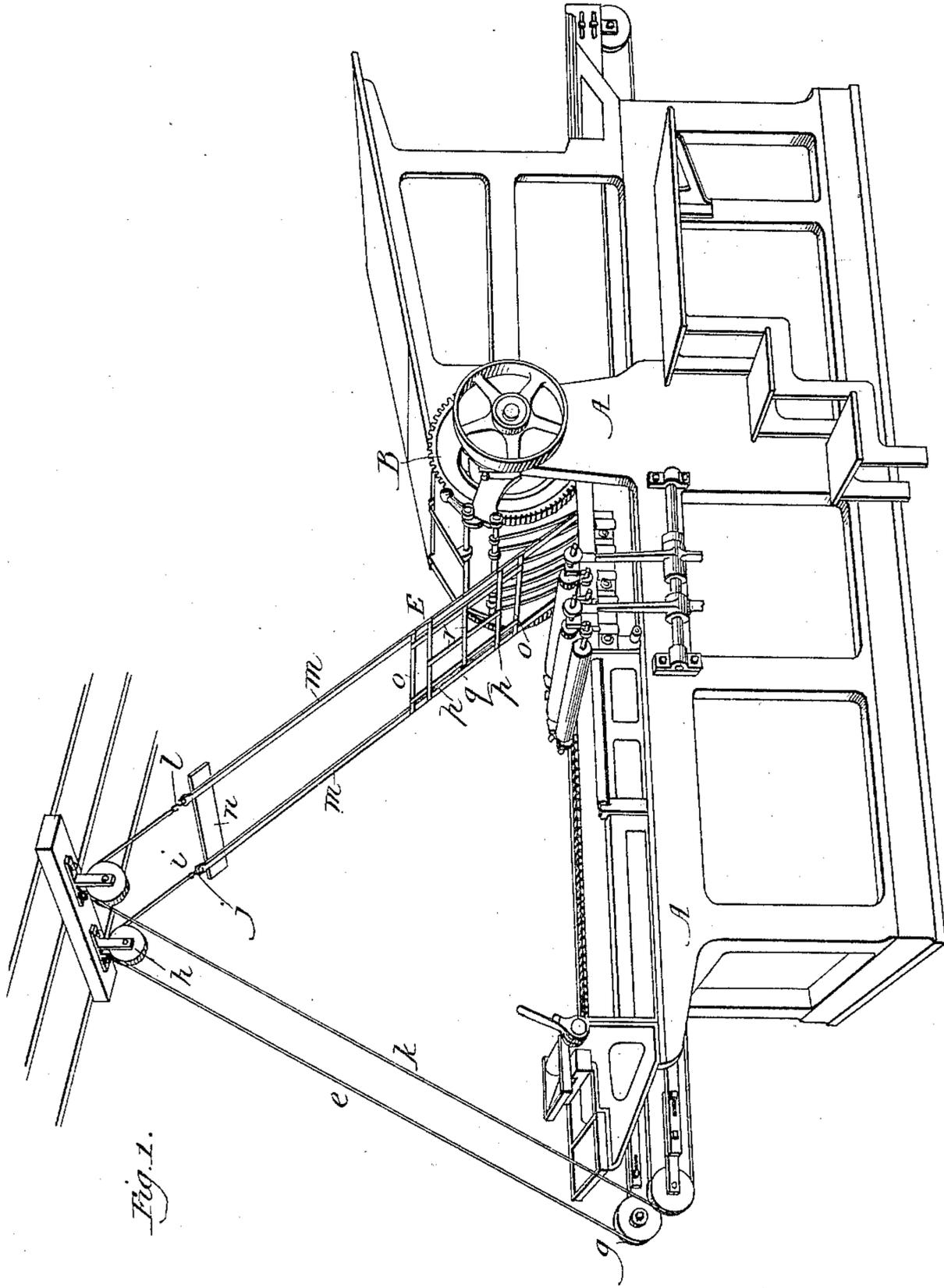
(No Model.)

2 Sheets—Sheet 1.

M. UMBDENSTOCK.  
PRINTING MACHINE.

No. 409,885.

Patented Aug. 27, 1889.



Witnesses  
Albert H. Adams.  
Harry S. Jones.

Inventor:

Michael Umbdenstock

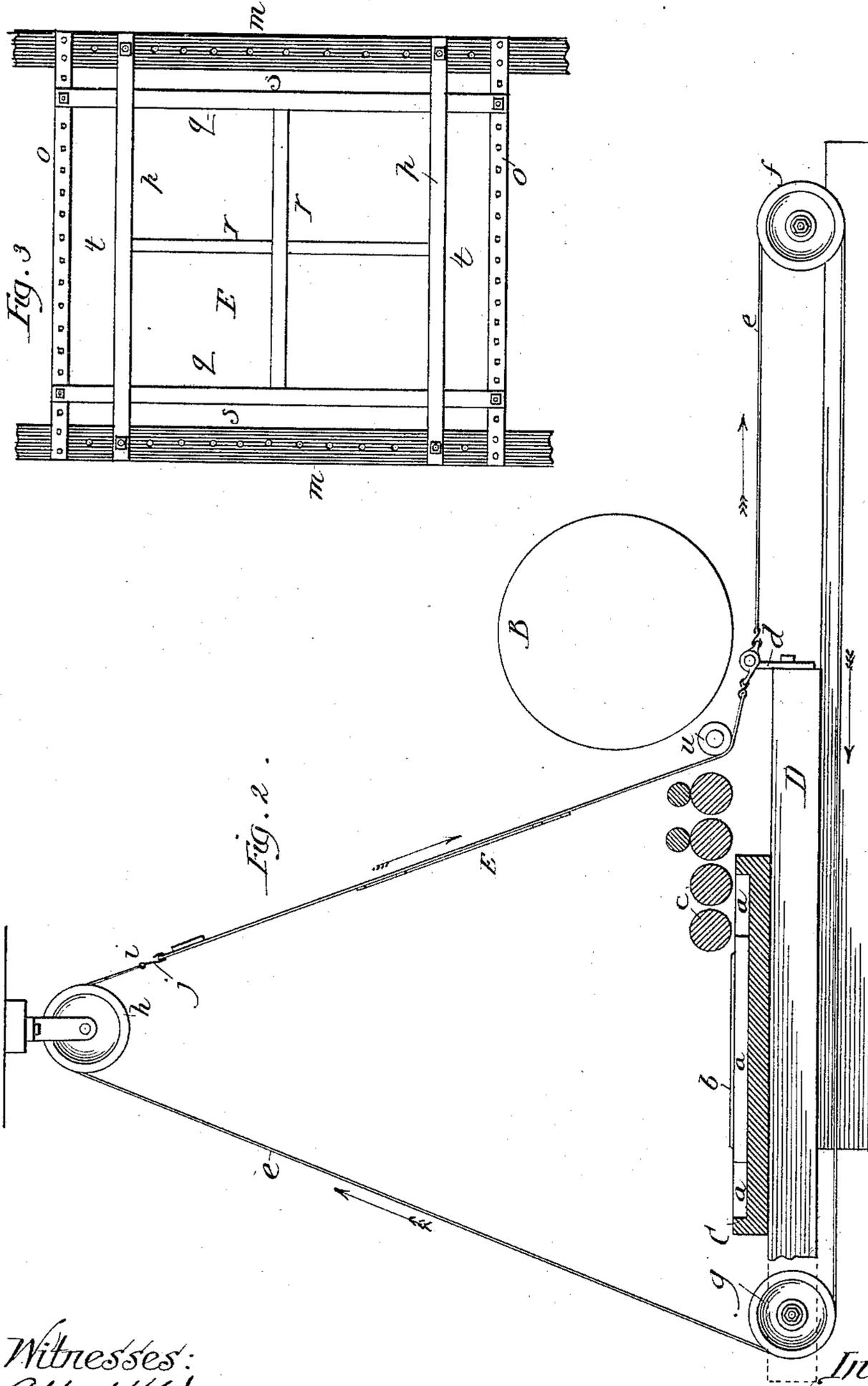
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# UNITED STATES PATENT OFFICE.

MICHAEL UMBDENSTOCK, OF CHICAGO, ILLINOIS.

## PRINTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 409,885, dated August 27, 1889.

Application filed December 10, 1888. Serial No. 293,228. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL UMBDENSTOCK, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Printing-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective of an ordinary power printing-machine to which my improvement has been applied. Fig. 2 is a view of so much of the machine as is necessary to show my attachment and illustrate the movement of the frisket. Fig. 3 is an enlarged detail of the frisket.

Prior to the making of my invention it was necessary in printing tints and pictures by means of a power-press to have the plate of the exact size of the tint or picture.

The object of my improvement is to provide an attachment for the machine by the use of which tints and pictures of different sizes can be printed without having the plates of the exact size of the tint or picture, which I accomplish by providing a movable frisket to cover so much of the plate as is not required, as illustrated in the drawings and hereinafter fully described.

That which I claim as new will be pointed out in the claims.

My improvement is primarily designed to be used for printing photogravures and tints, but may be used for other purposes.

In the drawings, A represents part of a power printing-machine such as is in common use.

B is the cylinder of the machine.

C represents the sliding bed, supported upon side pieces D, which move in guideways, as usual. As shown, the bed C is countersunk; but the countersunk portion is filled with pieces of metal *a* or other suitable material.

*b* is a plate of glass or other suitable material, from which the printing is done, which plate is secured to the bed in any well-known manner, the fastenings for this purpose not being shown in the drawings.

*c* are the usual inking-rollers.

Thus far the parts described are all old.

*d* are brackets, one of which is secured to

the front end of each sliding piece D. The upper end of each bracket is, as shown, enlarged and provided with two eyes.

*e* is a cable, which is connected at one end with one of the brackets *d*. This cable passes over the pulleys *f g h*, terminating, as shown, at *i*, where it is provided with a hook *j*.

*k* is another cable, similar to *e*, one end of which is connected with the bracket on the other side of the machine and at the forward end of the strip corresponding with D. This cable extends over pulleys, and is provided at the other end with a hook *l*.

*m m* are two strips of leather, one end of each of which is connected with one of the brackets *d* and the other end with one of the hooks *j l*.

*n* is a bar connected to the leather strips *m*. The strips *m* are provided with a series of holes. (See Fig. 3.)

*o* are two thin strips of sheet-brass, the ends of which are secured to the strips of leather *m*.

*p* are two other strips of thin brass, also secured to the pieces of leather *m*.

*q* are two other strips of thin brass, which are connected at their ends with the strips *o*.  
*r* are strips of paper secured to the bars *p* and *q*.

The device shown in Fig. 3 and on a smaller scale in Fig. 1, and which for designation I letter E, is, in effect, a frisket.

The spaces *s* between the strips *q* and the pieces of leather *m* are to be covered with paper, and the spaces *t* are to be covered in the same manner.

The pieces *p* and *q* can be adjusted, as may be desired, nearer to or farther from each other.

*u* is a guide-roller.

The frisket is so arranged that it registers properly with the plate *b*.

The devices by means of which the bed is operated and moved to and fro beneath the cylinder are not shown, but are to be the same as those now in common use for that purpose.

The pulleys which are connected with the machine and over which the cables pass are supported by brackets, which can be adjusted so that proper tension can be put upon the cables.

In use the frisket will be moved automati-

cally by the movement of the cables as the bed moves, and as the bed passes under the cylinder the frisket will be brought over the plate *b*, and only those portions of this plate  
5 which are not covered by the frisket will come in contact with the paper which is receiving the impression.

The frisket, as shown in Fig. 3, is designed to be used in printing four separate pictures.  
10 By removing the paper strip *r* it will be adapted for use in printing a single picture.

It is common to print a tint on a sheet, the tint covering much more space than the picture, and after that to print the picture upon  
15 the same sheet, which then will be surrounded by a tint. By the use of my attachment the tint and the picture can be printed from the same plate, the frisket being first so arranged that so much of the plate as is to receive the  
20 tint color will be exposed when the frisket is over the plate, and after the tint has been printed on the sheet changing the frisket so that only so much of the plate will be exposed as is required for printing the picture. As  
25 the strips *o*, *p*, and *q* are made of thin metal, it will be advisable to cut out portions of the tympan, so as to make shallow recesses therein to receive such metal strips to prevent them from making an impression on the sheet which  
30 is being printed.

I do not confine myself to the use of leather strips *m*. Any suitable material may be used in their place which has sufficient flexibility and non-elasticity. These pieces pass constantly back and forth beneath and over the  
35 roller *u*, and they should be made of material

which will not stretch. The cables and strips *m m* must be under suitable tension while in use, so that the frisket will constantly register with the plate *b*. This plate may be made of  
40 any suitable material, and type might be used with the bed *C* and with my frisket.

The frisket may be provided with any suitable number of openings, according to the number of pictures to be printed at the same  
45 time, and such openings may be square, round, oval, or irregular in shape.

That which I claim as new, and desire to secure by Letters Patent, is as follows:

1. In combination with the sliding bed of a  
50 printing-press, a frisket connected by cables with such bed, substantially as and for the purpose specified.

2. A frisket consisting of side pieces, as *m m*, and adjustable straps, in combination with  
55 cables connected with the frisket and with the sliding bed of a printing-machine, substantially as and for the purpose specified.

3. The combination of the sliding bed of a printing-press, a frisket connected with ca-  
60 bles, and pulleys over which the cables run, substantially as and for the purposes specified.

4. In combination with the sliding bed of a printing-press, a flexible frisket connected with the sliding bed by means of cables, and  
65 a guide-roller *u*, substantially as and for the purposes specified.

MICHAEL UMBDENSTOCK.

Witnesses:

ALBERT H. ADAMS,  
HARRY T. JONES.