

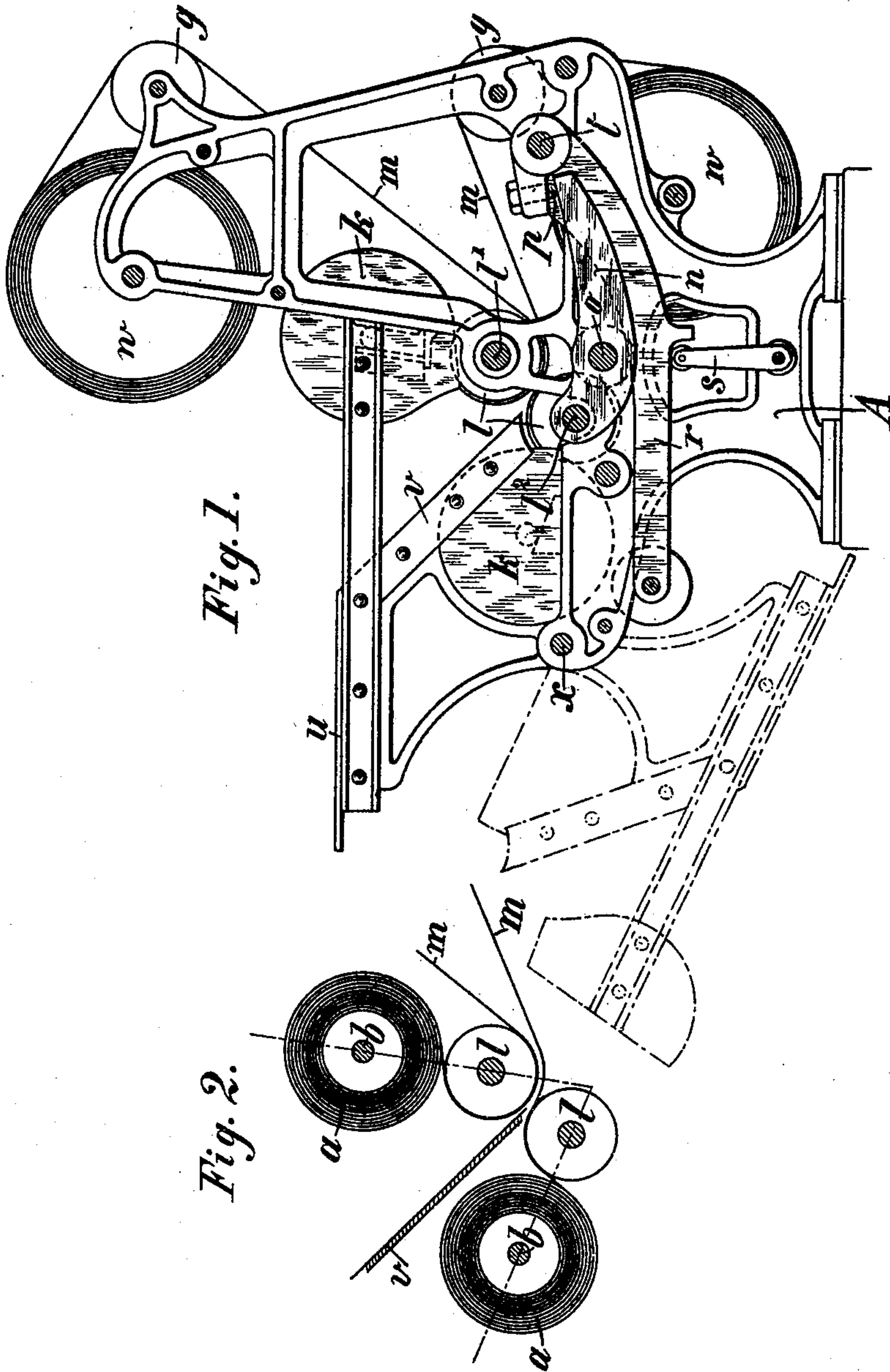
No. 636,551.

Patented Nov. 7, 1899.

F. G. J. POST.  
COPYING PRESS.

(Application filed May 9, 1899.)

(No Model.)



Witnesses:  
*B. H. H.*  
*B. H. Sommers*

Inventor:  
*Friedrich Gustav Julius Post*  
by *[Signature]*  
*Atty.*



# UNITED STATES PATENT OFFICE.

FRIEDRICH GUSTAV JULIUS POST, OF HAMBURG, GERMANY.

## COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 636,551, dated November 7, 1899.

Application filed May 9, 1899. Serial No. 716,140. (No model.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH GUSTAV JULIUS POST, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented a new and useful Copying-Press, of which the following is a specification.

My invention relates to a copying-press in which a pair of pressure-rollers are made to operate in combination with one or more rolls of moistened paper; and it consists of the peculiar construction and arrangement of parts, hereinafter more fully described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of my improved copying-press; and Fig. 2, a detail showing diagrammatically the arrangement of one pair of copying-paper rolls, the pressure-rollers, and an inclined table from which the documents to be copied are fed between the webs of the two paper-rolls.

Similar letters refer to similar parts throughout both views.

In the drawings a copying-press is illustrated which is particularly designed to produce simultaneously copies of the writing or print on both sides of a manuscript or of the writing from one side of two written or printed manuscripts placed one upon the other back to back. To this effect two rolls of copying-paper *a a*, duly impregnated or moistened, are inclosed by cases or boxes *k k* and arranged parallel to the copying or pressure rollers *l l*, of india-rubber, in such a manner that both the paper-webs *m m* may be led through the said pressure-rollers and while the latter are turned drawn off from the paper-rolls, which are thus caused to turn about their arbors *b b* within the cases *k k*. The manuscript documents or writings to be copied are fed from the table *u* and guided by the inclined slide *v* between the two webs *m m* and the pressure-rollers *l l* by causing the latter to rotate.

While the arbor *l'* of the upper pressure-roller is journaled in fixed bearings of the main frame *A*, each pivot *l''* of the lower pressure-roller is journaled at the one free end of a double-armed lever *n*, which is fastened on an arbor *o*, traversing the frame *A* and journaled in suitable bearings thereof. Upon the

other free end of each lever *n* bears a set-screw *p*, under the influence of a weighted lever *r*, which swings about its fulcrum *t*, fixed to the frame *A*, and may be set at rest by means of a suitable support or stays, Fig. 1. If the latter is turned sidewise, the weighted levers *r* are set free to act upon the long arm of the levers *n*, through the medium of the set-screws *p*, whereby the lower pressure-roller is pressed gently against the upper roller *l* in order to exert the necessary pressure upon the moistened copying-paper and the manuscript for taking distinct impressions from the latter while the upper pressure-roller is rotated by positive motion.

From the foregoing it is obvious that the four sides of a double-sheet manuscript, if duly spread out, may be at once copied or simultaneous impressions taken on the two webs of copying-paper from one side of two manuscripts placed one upon the other back to back, which is of great advantage if compared with the roller copying-presses heretofore employed.

The webs *m m* of the copying-paper rolls, provided with the impressions taken from the manuscripts, may pass either over guide-rollers *g g* to the reels *w w*, upon which they are wound, as shown in Fig. 1, or to a severing device, (not shown in the drawings,) which is designed to cut the copying-paper into single sheets. The manuscript after passing the rolls *l l* may be detached from the web and caused to drop outward from the press into a suitably-placed casing.

The table *u*, with the slide *v*, is preferably attached to the frame *A* by a bolt *x*, about which it may be turned into the position, as shown in dotted lines in Fig. 1, to render the copying-paper rolls accessible. To this end the covers of the cases *k*, containing the moistened copying-paper rolls *a a*, are fixed to or integral with that part of the frame carrying the table *u* and the slide *v*.

Suitable gearing on the axes of the reels *w w* and the pressure-rollers *l l*, meshing with one another, are provided to secure a regular and positive motion of the operating parts.

The herein-described copying-press is particularly adapted for the employment of copying-paper rolls impregnated or moistened in accordance with my former invention, for



which I have filed a separate application, Serial No. 716,139, filed May 9, 1899. As the moistened paper-rolls are inclosed by the cases *k k*, they are at any time ready for use, since the moisture is maintained within the paper-rolls, owing to their more or less tight winding up, as well as to their inclosure within the cases *k k*.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a copying-press, the combination with a pair of revolving pressure-rolls, of two rolls of moistened tissue-paper so arranged relatively to said pressure-rolls that the latter will hold the tissues in a position to admit of the placing of the matter to be copied between them, for the purpose set forth.

2. In a copying-press, the combination with a pair of revoluble pressure-rolls, of two rolls of moistened tissue-paper so arranged relatively to said pressure-rolls that the latter will hold the tissues in a position to admit of the placing of the matter to be copied between them, and means for guiding the tissues to different points after passing from between said pressure-rolls, for the purpose set forth.

3. In a copying-press, the combination with a pair of revoluble pressure-rolls, of two rolls of moistened tissue-paper arranged relatively to said pressure-rolls so that the latter will hold the tissues in a position to admit of the placing of the matter to be copied between them, and means for separately reeling said tissues, for the purpose set forth.

4. In a copying-press, the combination with a pair of revoluble pressure-rolls, of two rolls of moistened tissue-paper, an inclosing casing for each of said rolls having passages for the webs of tissue so arranged relatively to the pressure-rolls that the latter will hold the two tissues in a position to admit of the placing of the matter to be copied between them, for the purpose set forth.

5. In a copying-press, the combination with a pair of revoluble pressure-rolls, and two revoluble rolls of moistened tissue-paper arranged relatively to said pressure-rolls so that the latter will hold the two tissues in a position to admit of the placing of the matter to be copied between them; of a feed-table for feeding said matter to the nip of the pressure-rolls between said tissues, for the purpose set forth.

6. In a copying-press, the combination with a pair of revoluble pressure-rolls and two rolls of moistened tissue-paper revoluble in bearings above one of said pressure-rolls and in front of the other respectively, so that the two tissues will be guided over a portion of the peripheries of their respective rolls to the nip thereof, and a feed-table arranged to guide

the matter to be copied to the nip of the pressure-rolls between the two tissues, for the purpose set forth.

7. In a copying-press, the combination with a pair of revoluble pressure-rolls, and two revoluble rolls of moistened tissue-paper arranged near, and relatively to said pressure-rolls so that the latter will hold the two tissues in a position to admit of the placing of the matter to be copied between them; of a feed-table for feeding the matter to be copied to the nip of the pressure-rolls between said tissues, and means for tilting said table away from the pressure and tissue rolls, for the purpose set forth.

8. In a copying-press, the combination with the lower roll of a pair of superposed pressure-rolls, and a pair of two-armed levers in the shorter arms of which said lower pressure-roll is journaled, of a pair of weighted levers having bearing on the free ends of the aforesaid two-armed levers, for the purpose set forth.

9. In a copying-press, the combination with the lower roll of a pair of superposed pressure-rolls and a pair of two-armed levers, in the shorter arms of which said lower roll is journaled; of a pair of two-armed weighted levers, and a screw adjustable in the shorter arms of said weighted levers, said screws having bearing on the free ends of the longer arms of the pressure-roll-supporting levers, for the purpose set forth.

10. In a copying-press, the combination with the lower roll of a pair of superposed pressure-rolls and a pair of two-armed levers, in the shorter arms of which said lower roll is journaled; of a pair of two-armed weighted levers, and a screw adjustable in the shorter arms of said weighted levers, said screws having bearing on the free ends of the longer arms of the pressure-roll-supporting levers, and means for relieving the latter of the pressure exerted thereon by the weighted levers, for the purpose set forth.

11. The combination with the framing of a copying-press, a pair of pressure-rolls revoluble in bearings in said framing, two reels for moistened tissue-paper likewise revoluble in bearings in the framing above one of the pressure-rolls and in front of the other, respectively, and a portion of an inclosing casing for each of said reels secured to the framing; of a feed-table constructed to guide the matter to be copied to the nip of the pressure-rolls, and the complementary portions of the casings for the reels secured to said feed-table, and means for tilting said table away from the pressure-rolls and reels, for the purposes set forth.

FRIEDRICH GUSTAV JULIUS POST.

Witnesses:

ALEXANDER SPECHT,  
E. H. L. MUMMENHOFF.