V. HIMMER, JR.

PRINTING DEVICE.

APPLICATION FILED JUNE 24, 1915.

1,191,697.

Patented July 18, 1916.

3 SHEETS—SHEET 1.

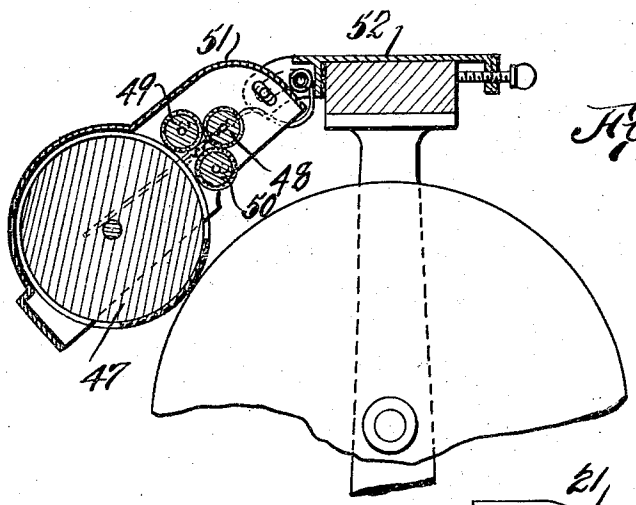


Fig. 1

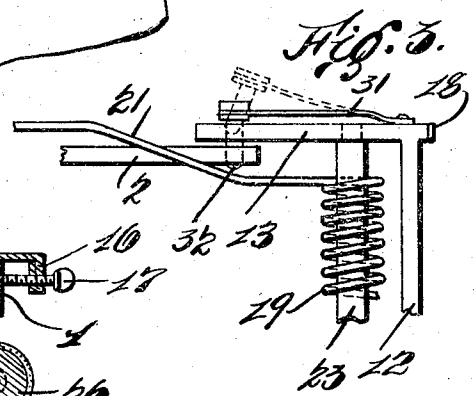


Fig. 3.

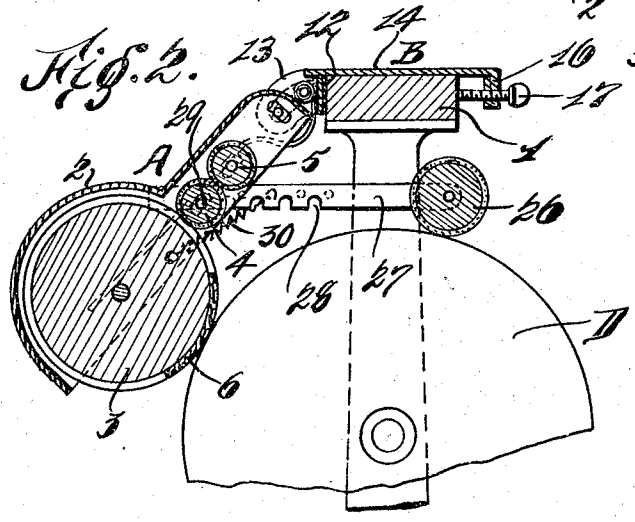


Fig. 2.

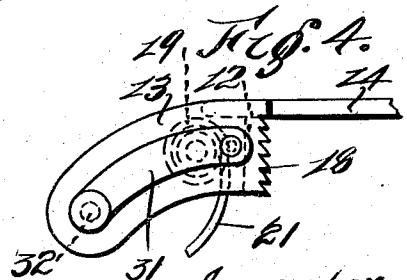


Fig. 4.

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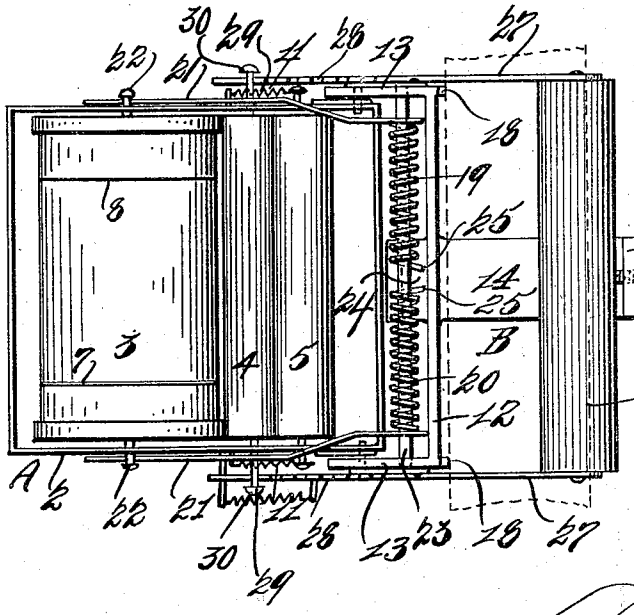


Fig. 11.

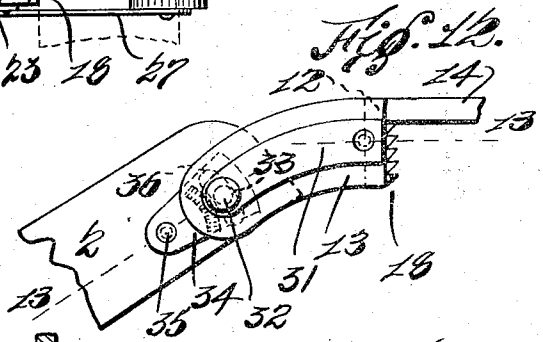


Fig. 12.

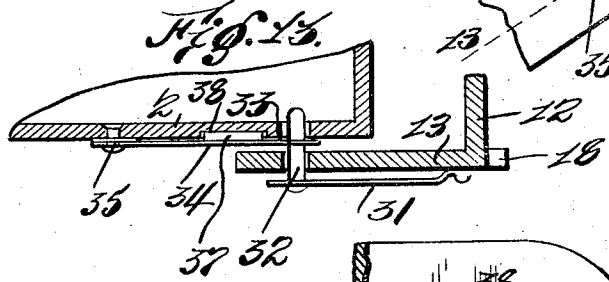


Fig. 13.

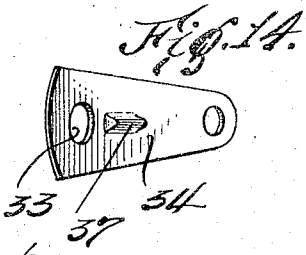


Fig. 14.

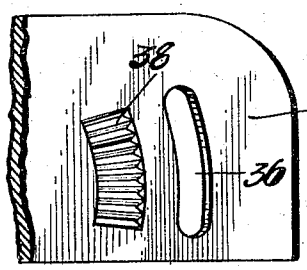


Fig. 15.

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3 SHEETS—SHEET 3.

Fig. 5.

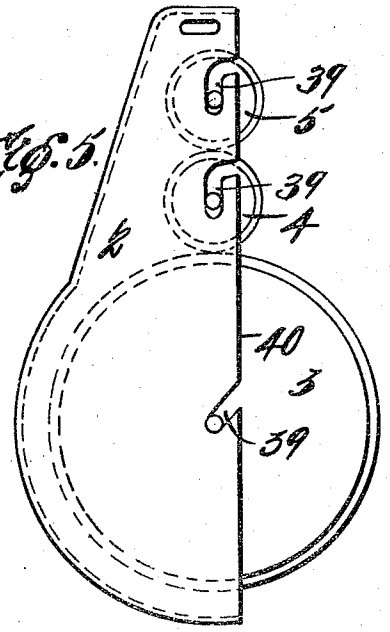


Fig. 6.

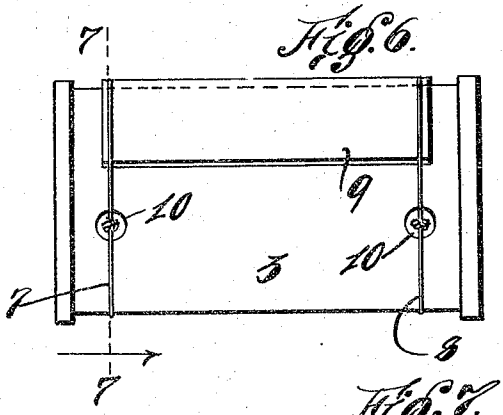


Fig. 7.

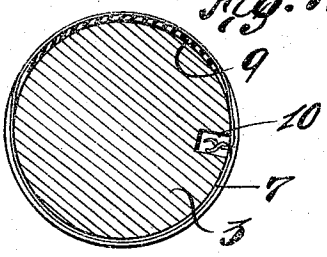


Fig. 8.

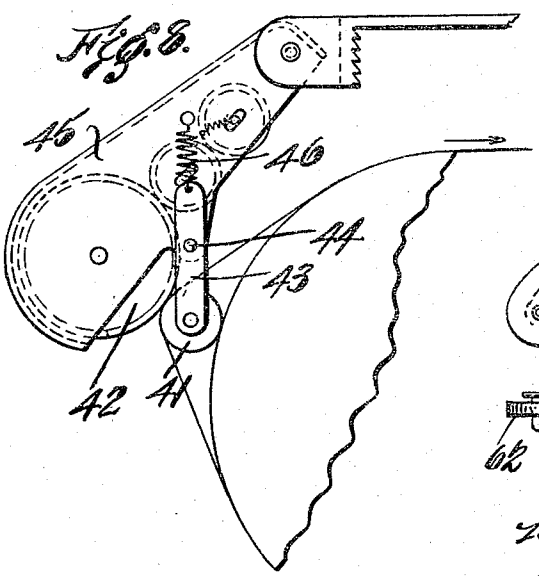
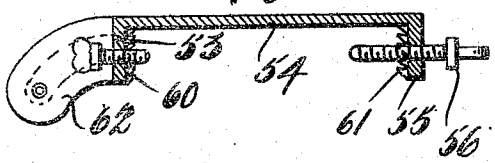


Fig. 10.



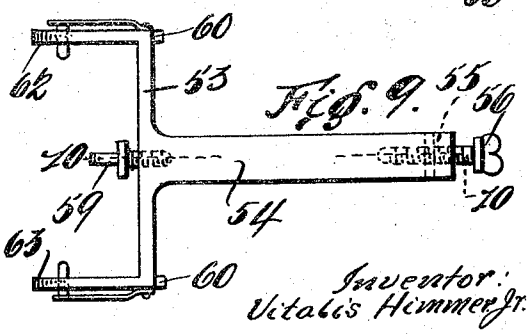


Fig. 9.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

VITALIS HIMMER, JR., OF BAYONNE, NEW JERSEY, ASSIGNOR TO CHARLES K. ASH, OF BROOKLYN, NEW YORK.

PRINTING DEVICE.

1,191,697. Specification of Letters Patent. Patented July 18, 1916.

Application filed June 24, 1915. Serial No. 36,044.

To all whom it may concern:

Be it known that I, VITALIS HIMMER, JR., a citizen of the United States of America, residing at Bayonne, Hudson county, State of New Jersey, have invented certain new and useful Improvements in Printing Devices, of which the following is a full, clear, and exact description.

This invention relates to improvements in printing machines arranged for attachment to the brackets with which rolls of wrapping paper are usually provided.

The class of paper-rolls for which my invention is adapted is that usually found on the counters of the stores of trades-people and from which sheets are torn off from time to time to wrap up articles of merchandise.

The object of my invention is to provide a printing device that will print upon the paper forming the roll a suitable advertisement, the name of the proprietor, or any desired legend.

My invention comprises various features of the improvement which jointly acts to produce an efficient device and which permit the printing device to automatically accommodate itself to the surface of the roll of paper. Furthermore, I have provided means to produce a clean-cut type-impression upon the surface of the paper. These briefly referred to improvements will be pointed out in detail in the following description thereof, reference being had to the accompanying drawings, forming part hereof, wherein—

Figure 1 is a sectional view of one embodiment of my invention; Fig. 2 is a similar view of a preferred embodiment of my invention, certain parts being omitted for clearness of illustration; Fig. 3 is an enlarged fragmentary bottom plan view of a portion of the bracket and a portion of the printing-frame carried by the bracket, showing also a portion of the tension spring and a releasable latch for holding the printing-frame in position on the bracket therefor; Fig. 4 is an enlarged fragmentary side view of the parts illustrated in Fig. 3; Fig. 5 is a diagrammatic side elevation of a printing-frame, and rollers carried thereby, showing one way of mounting the rollers thereon; Fig. 6 is a face view of the printing roller showing a preferred means to secure the printing pad thereto; Fig. 7 is a sectional view thereof, the section being taken on a line 7—7 in Fig. 6; Fig. 8 illustrates the employment of a transferring roll in connection with the printing roller; Fig. 9 is a top plan view of one form of supporting bracket for the printing device; Fig. 10 is a sectional view thereof, the section being taken on a line 10—10 in Fig. 9. Fig. 11 is a bottom plan view of the device illustrated in Fig. 2, the parts omitted in Fig. 2 being shown in this figure; Fig. 12 is an enlarged fragmentary side view of the invention as embodied in Figs. 2 and 11, showing the automatic lock for the printing-frame, and releasable latch; Fig. 13 is a sectional plan view, the section being taken on a line 13—13 in Fig. 12; Fig. 14 is an enlarged perspective view of one of the automatically operating locking devices, and Fig. 15 is a perspective view of the pivoted end of one side of the printing-frame.

Referring to the form of my invention illustrated in Figs. 2 and 11 to 15 inclusive, it consists of a printing device A and a bracket B by means of which the printing device is secured to the frame 1 carrying a roll of paper D.

The printing device A consists of a frame or support 2 which rotatably supports a printing roller 3 and inking rollers 4 and 5, the printing roller being provided with type indicated by 6 which apply to the surface of the paper, the selected legend, advertisement, etc. To secure the type to the roller 3, I preferably bind the same to said roller by means of straps, in this instance wires 7 and 8 (Figs. 6 and 7). The type is preferably of rubber carried by a flexible pad 9 which may also be of rubber. The straps 7 and 8 are passed over the pad 9 and around the roller 3, the ends being clenched, the clenched ends being forced into recesses 10 in the roller 3, to carry them out of the path of movement of the face of the type. The roller 5 will be supplied with ink, the ink being transferred to the type by the spreading roller 4. Springs 11 are employed to force the rollers 4 and 5 ahead to cause the roller 4 to contact with the type carried by the pad 9.

The bracket B consists of a vertically disposed plate 12 having ears 13 attached thereto, said ears supporting the printing-frame A, and a rearwardly extending plate 14 disposed at a right angle to the plate 12.

The plate 14 is provided with a flange 16 carrying a set-bolt 17. The set-bolt 17 acts in conjunction with teeth 18 on the plate 12, the said teeth being located at each end of said plate, to hold the bracket B in position on the frame 1 for the roll of paper.

To force the type on the roller 3 firmly against the paper I employ springs 19 and 20, each having a resilient arm 21 long enough to rest upon the pivot pins 22 for the roller 3. The springs 19 and 20 are carried by a bar 23 secured at its ends to the ears 13 of the bracket B. The plate 12 carries an abutment-plate 24 against which the inner end 25 of each spring 19 and 20 bears.

To prevent the fresh ink upon the torn off sheets from smearing, I provide a blotting roller 26 carried by arms 27 having notches 28 which will engage (in this instance) the pivot-pins 29 for the spreading roller 4. A spring 30 serves to keep the blotting roller in contact with the paper. The notches 28 serve to render the blotter roller adjustable.

To secure the printing-frame to the bracket, I employ a releasable latch consisting of resilient plates 31 carrying pins 32 which engage openings 33 in yieldable plates 34 pivotally secured at 35 to the frame 2. The inner end of each pin 32 passes into a slot 36 in the frame 2. The function of the plate 34 is to serve as a locking device, and for this reason is provided with a tooth or projection 37 arranged to engage recesses 38 in the frame 2 (see Figs. 14 and 15).

By the provision of the pivotal plate 34, the frame 2 is free to accommodate itself to the surface of the paper, that is to say, the roller 3 will automatically seek a position parallel with the surface of the roller D, for the reason that the frame 2 is not prevented, at its attached end, from being moved in a direction at a right angle to the axis of the pins 22 together or separately, whereby the roller 3 will accommodate itself to the paper on the roll D. In other words, should the roll of paper be out of true and one side lower than the other, the frame therefor being plumb, the roller 3 would fall at the low side of the roll; hence the frame 2 would drop on the low side, the pivotal plate 34 permitting such movement. In fact, the frame 2 pivots at the point 35 when the frame and bracket are secured together, one side being free to move up while the other moves down, or both can move together. The tooth 37 and recesses 38 serve to lock the plate 34 and frame 2 together after the frame has found its bearing, whereupon the pins 32 become the pivot points. The tooth 37 will jump the recesses 38 while the frame 2 is finding its bearing.

The plates 31, carrying the pins 32 are yieldable and can be sprung outwardly as shown by dotted lines, Fig. 3, to cause the pins 32 to leave the plates 34 for the purpose of separating the inking frame and bracket therefor.

Instead of mounting the rollers 3, 4 and 5 as shown in Figs. 2 and 11, I may provide the frame 2 with slots 39 as shown in Fig. 5, communicating with the edge 40 of the frame whereby the said rollers are rendered easily removable.

In some instances, I may provide a guide roller 41 in combination with a printing roller 42, as shown in Fig. 8, the said guide roller being carried by arms 43 (one only being shown) pivoted at 44 to the inking frame 45, a spring 46 acting to keep the arm 43 in a vertical position. The papes passes between the printing roller and guide-roller, as shown, as it is drawn from the roll. This guide-roller is useful in connection with a paper roll, the surface of which is uneven, as it will provide an even surface for the paper and hence a clear impression will be made.

In the device as illustrated in Fig. 1, I employ a printing roller 47, an ink roller 48 and a plurality of spreading rollers 49 and 50, the frame 51 of the printing mechanism being carried by a bracket 52 similar to the bracket B of the device as illustrated in Fig. 2. The rollers 49 and 50 together spread the ink received from the roller 48 evenly over the surface of the type on the roller 47; or in other words, roll it out to prevent the collection of too much ink at any one point of the printing surface.

Instead of employing a bracket such as the described bracket B, I may use a bracket such as is illustrated in Figs. 9 and 10, consisting of a vertical plate 53 integral with a rearwardly extending plate 54. A flange 55 on the plate 54 carries a set-screw 56 and the vertical plate a set-screw 59 together with teeth 60 at each end of said plate 53, the flange 55 also carrying teeth 61. To support the printing-frame, the plate 53 is provided with ears 62 and 63.

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

1. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, and a pin at each end of said bracket arranged to engage the adjacent plate on said frame.

2. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, a resilient plate located at each end of said bracket, and a pin carried by each plate releasably engaging the adjacent plate on said frame.

3. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by

said frame on each side thereof, a pin at each end of said bracket engaging the adjacent plate on said frame, and means to lock said plate in adjusted positions.

4. In a printing device, a frame, printing elements carried thereby, a bracket for said frame, a pivotally mounted plate carried by said frame on each side thereof, a pin at each end of said bracket engaging the adjacent plate on said frame, a tooth or projection carried by each pivotal plate, said frame, at each side thereof, being provided with recesses located in the path of movement of the tooth on said pivotal plates.

5. In a printing device, a frame, printing elements carried thereby, a support for said frame, and means pivotally connecting said frame and support therefor, arranged to permit said frame to move or shift independently at each side thereof at a right angle to the axes of the pivotal connections.

6. In a printing device, a frame, a printing roller carried thereby, type carried by said roller, means to ink said type, a bracket for said frame, a resilient plate carried by said bracket at each end thereof and a pin carried by each plate, said frame being provided with slots to receive said pins.

7. In a printing device, a frame, a printing element carried thereby, a support therefor pivotally secured to said frame, and means connecting said frame, at each side thereof, to said support arranged to permit either side of said frame to shift to permit the printing element to accommodate itself to the surface to be printed, the shifting of either side of said frame being independent of the shifting of the other side thereof.

Signed at New York city, N. Y., this 18 day of June, 1915.

VITALIS HIMMER, JR.

Witnesses:
EDWARD A. JARVIS,
MAURICE WOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."