

(No Model.)

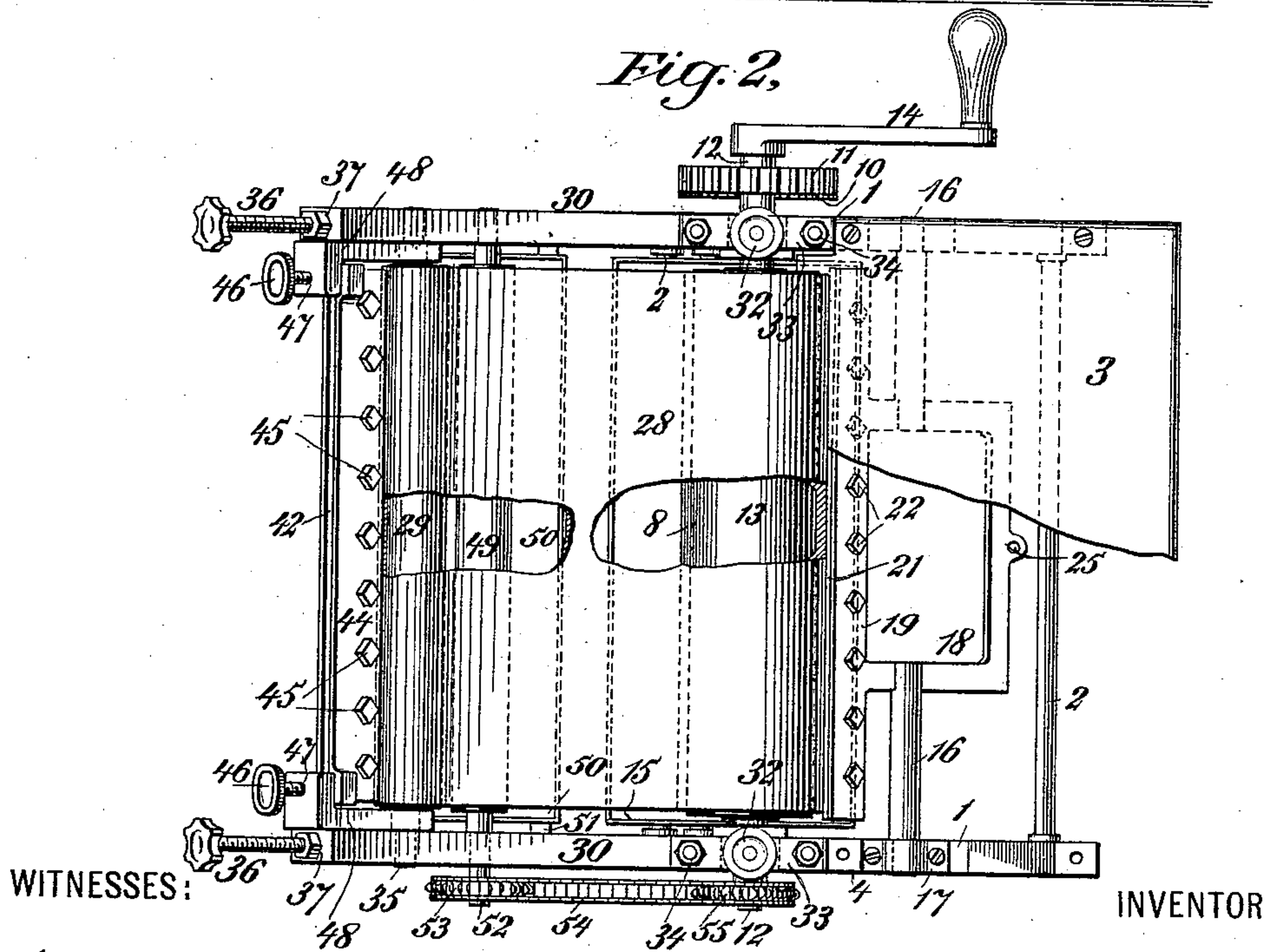
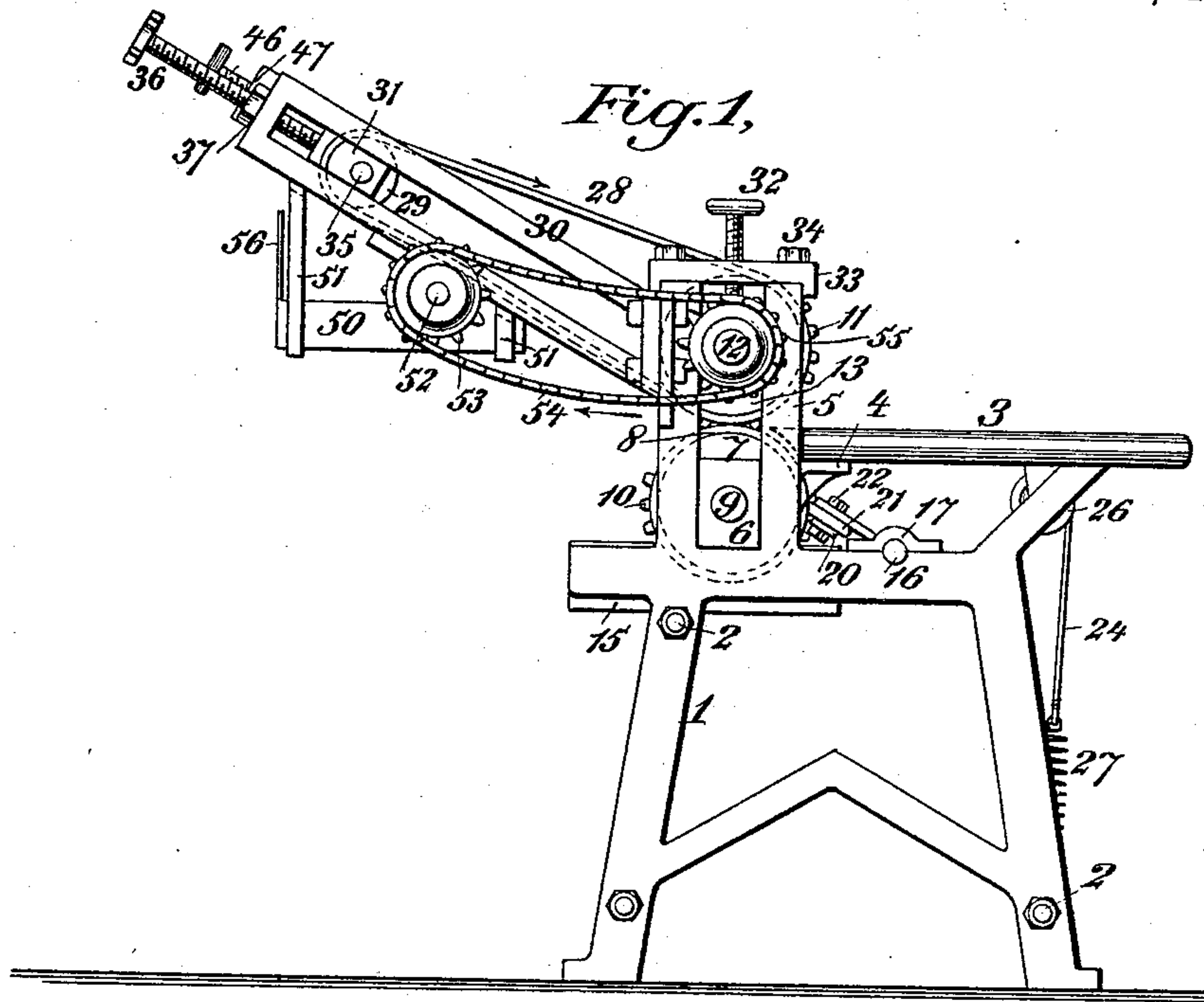
2 Sheets—Sheet 1.

J. W. McCABE.

MACHINE FOR MOUNTING PHOTOGRAPHIC PRINTS.

No. 529,183.

Patented Nov. 13, 1894.



WITNESSES:

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James W. McCabe
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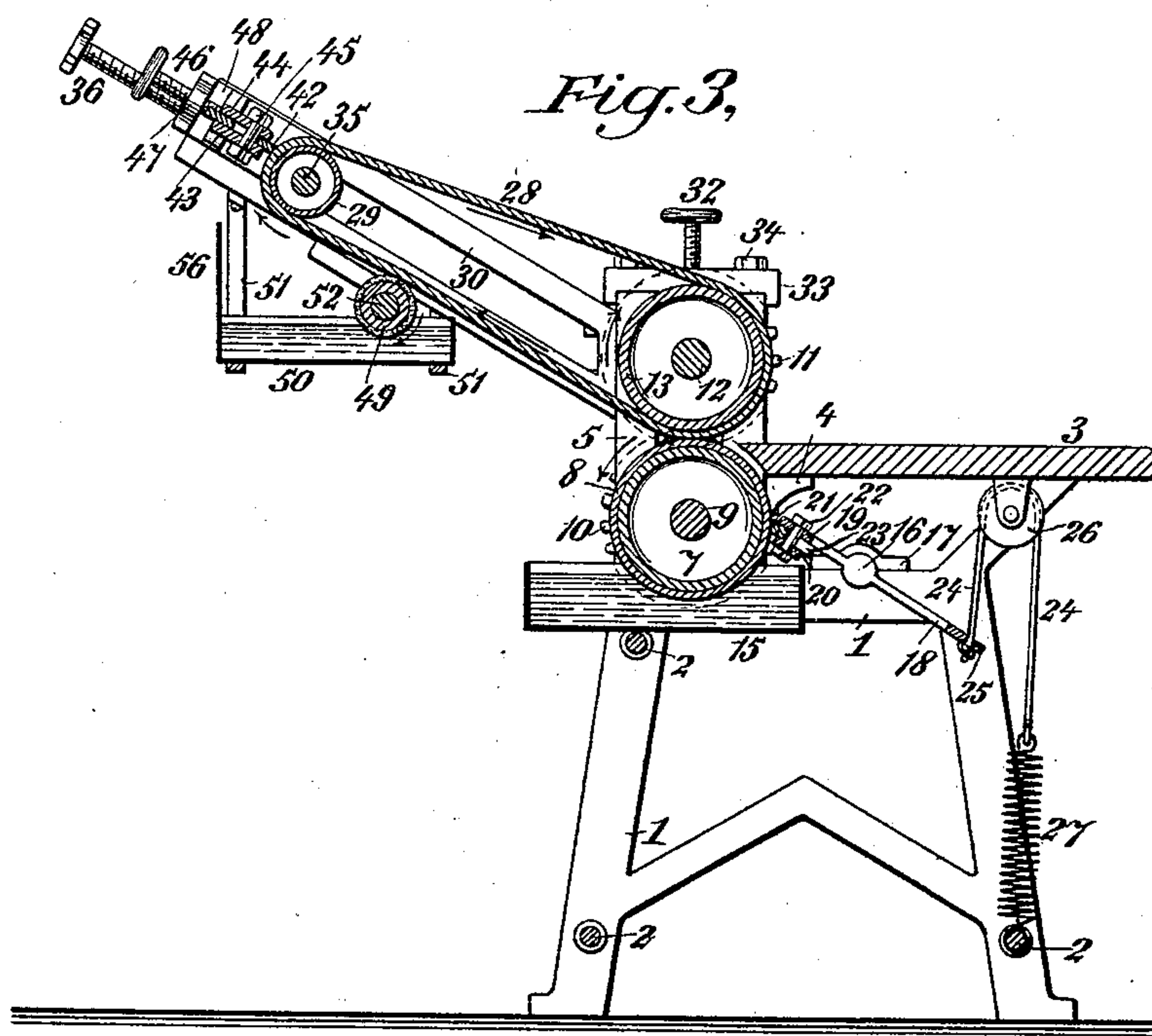
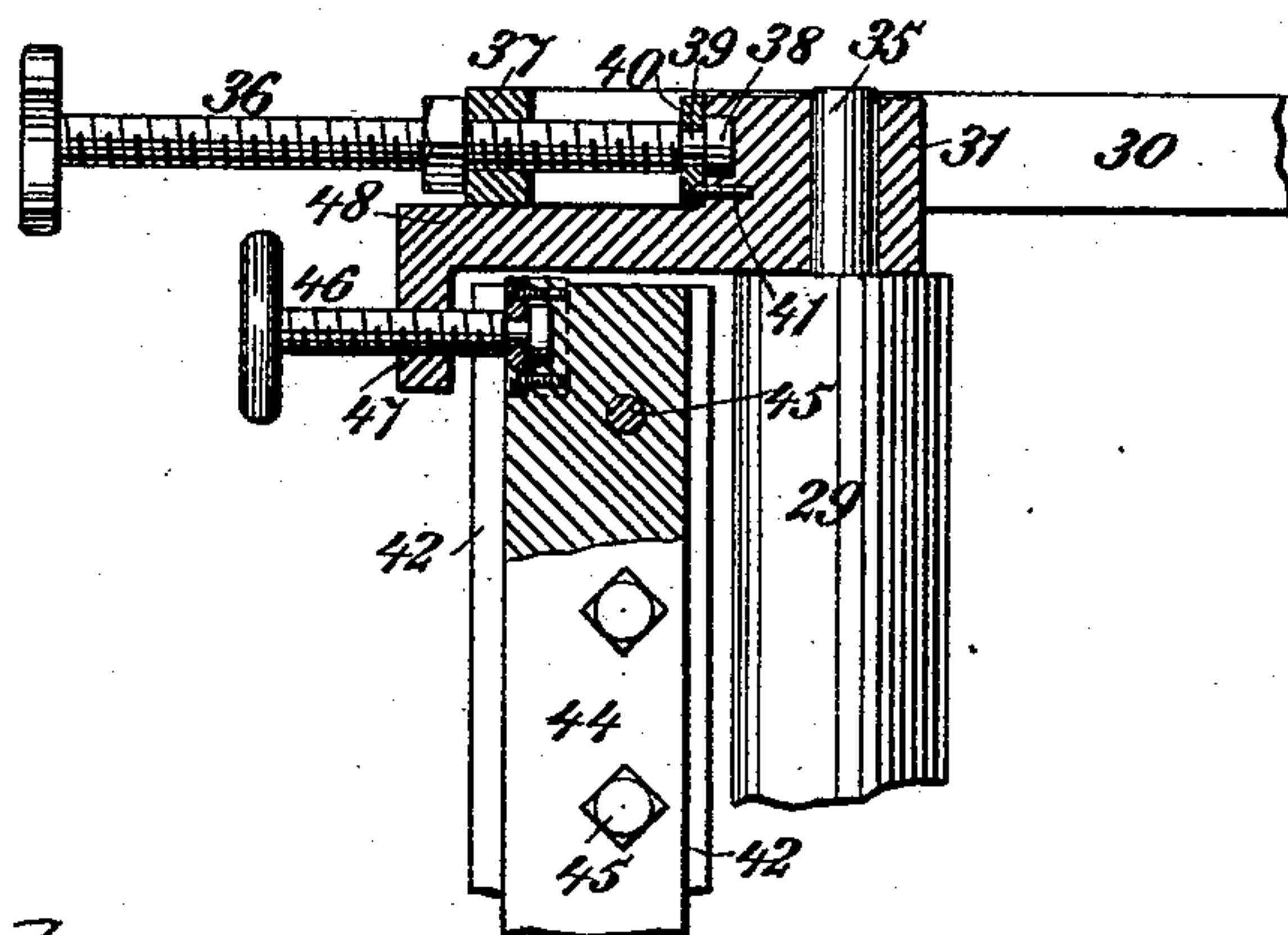


Fig. 4.



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JAMES W. McCABE, OF NEW YORK, N. Y.

MACHINE FOR MOUNTING PHOTOGRAPHIC PRINTS.

SPECIFICATION forming part of Letters Patent No. 529,183, dated November 13, 1894.

Application filed April 19, 1894. Serial No. 508,068. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. McCABE, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Machines for Mounting Photographic Prints, &c., of which the following is a specification.

My invention relates to apparatus for mounting photographic prints or the like upon card board or analogous supports, and has for its main objects to provide a machine in which such prints may be speedily and effectively pasted to their supports and without liability of the paste or other adhesive matter employed being transferred from the roll or carrier to subsequently pasted prints or to their mountings.

To these main ends my invention consists in certain features of construction and combinations of devices, all as will be hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of a machine embodying my improvements. Fig. 2 is a top plan view thereof, with the apron or endless belt carrier partially broken away to show the rolls beneath the upper ply of the same, and with the bed or table partially broken away to show the underlying parts. Fig. 3 is a central vertical section of the machine; and Fig. 4 is a partial transverse section enlarged to show the mode of adjusting the apron roller and scraper.

In the several views the same parts will be found designated by the same numerals of reference.

1 designates the side frames of the machine, which are suitably connected together by cross ties 2. 3 designates a bed or table supported by said side frames and by brackets 4. Rising from each side frame is a roller-frame 5, which is slotted longitudinally and vertically to receive bearing blocks 6 for the rollers.

7 designates a roller, which is provided with a soft rubber covering or sheath 8. On the axis 9 of said roller at one end is provided a gear wheel 10, which meshes with a gear wheel 11 on the axis 12 of an upper roller 13, said

axis 12 bearing a crank 14, or a pulley, by which the motive power may be applied to the machine.

Under the roller 7 and supported by the side frames is a pan or vessel 15, which contains a body of water and through which the rubber covering 8 revolves.

16, 16 are journals or arms, mounted in journal boxes 17 on the side frames, and said arms project laterally from a frame 18, the inner side of which is formed or provided with a transverse bar 19, which is perforated at suitable points along its length. Between this bar and an underlying bar 20, also perforated to correspond with the upper bar, is arranged a transverse strip of soft rubber 21 to serve the function of a scraper, the said scraper being held securely between the said bars by means of bolts and nuts 22. The scraper is preferably slotted as indicated at 23, whereby it may be adjusted in the direction of its width to bear at the desired locality upon the covering 8 when the machine is new and when wear takes place, there being a slot, as 23, where each bolt passes through.

For the purpose of holding the scraper against the roller with the proper degree of pressure, a strap or cord 24 is attached to the frame 18 at the perforation 25, and after passing over a pulley 26 on the under side of the table is attached at its opposite end to a coiled spring 27 secured upon one of the cross ties.

28 is an endless apron or carrier which passes around the roll 13 and around a smaller roll 29 adjustably arranged in a supplemental frame work 30, which projects upwardly and rearwardly, and is slotted to receive the bearing box 31 of said roller.

The supporting boxes of the shaft or axis of the roller 13 are held by adjusting screws 32, which pass through nuts formed in blocks 33 mounted on the frame 5 and held by bolts and nuts 34; and the bearing blocks 31 for the shaft or axis 35 of the roller 29 are held by adjusting screws 36, which pass through nuts 37 in the supplemental frame work, the lower end of each screw being formed with a collar 38, which is seated in a recess in the block 31, and with a neck 39 of smaller diameter, upon or around which is arranged a cap 40 secured to said block by screws 41, whereby the lower

end of the screw 36 is rotatably attached to the block 31 and may raise and lower the same and its appurtenances.

For the purpose of cleaning the outer surface of the apron another scraper 42, preferably composed of rubber, is provided, and said scraper is preferably secured between bars 43 and 44 by means of a series of bolts 45 in a manner similar to the scraper hereinbefore described. At each end of the scraper bars 43, 44, is connected an adjusting screw 46, the mode of attachment being similar to that described with reference to the screw 36. The screw 46 passes through a nut 47 extending laterally from an upright frame or bracket 48 formed integral with the block 31, which supports the apron roll 29. Shown more particularly at Fig. 4. By this construction and arrangement it will be seen that when the apron roll is adjusted by the screws 36 the scraper is simultaneously moved therewith, and the relationship between the scraper and the apron left undisturbed. When, however, it may be desired to increase or diminish the pressure of the scraper upon the apron, this may be accomplished independently by means of the screws 46 without changing the position of the apron roll.

49 designates another washing roller, composed preferably of a wooden core covered with felt or the like, which roller revolves in a pan or vessel of water 50, supported by hangers 51 from the supplemental frame work. This roller runs in contact with the underside of the apron 28, and its shaft 52 is provided with a sprocket wheel 53, about which runs a drive chain 54, which passes over another sprocket wheel 55 on the shaft 12. Thus the washing roller 49 and the apron are worked from the roll 13, the washing roller turning in a direction opposite to that of the under side of the apron, as indicated by the arrows.

Having now sufficiently described the general construction of the machine embodying my improvements, I shall now more particularly describe the mode of operation of the same.

The photographic print or the like is first pasted by hand to or upon the card board in correct or true position. Then before the paste dries the article is laid face down upon the table, and the machine being in motion the leading edge of the card board is passed between the apron and the lower roller 7, whereupon it is fed through said devices, and by reason of the pressure exerted the paste is evenly distributed, and the print caused to firmly adhere to the card board. By reason of this pressure some of the moisture is removed from the paste, and at the same time some of the paste may be squeezed out on to the card board at the edges of the print, and as a consequence the extracted paste is offset upon the surface of the roll 7. Hence this roll must therefore be cleansed before it operates upon the next card board or print. The

portion of the roller thus supplied with paste immediately travels through the pan of water, whereby it is washed and thinned and partially cleaned. On rising from the pan the surface of the roller almost immediately comes in contact with the scraper 21, which then acts to scrape or wipe off any portions of paste which may still adhere to the roller, and at the same time to practically dry the surface of the roller, the paste and water thus scraped from the roller falling back into the pan, which may be recharged from time to time as found necessary. Thus by reason of the washing and scraping action on this roller a clean surface is always presented to the print and card board, and all liability of smudging or smutting the same with paste is thereby avoided. If the edges of the print should lie close to the edges of the card board some of the paste will be forced out to the edges of the card board and will offset upon the apron. For the purpose therefore of maintaining the apron always in a cleanly condition I provide the washing roll 49 and the scraper 42 therefor. It will be seen of course that any paste which may have been squeezed out upon the apron will be washed by the roller 49 and partially removed by the same, and that any particles of paste which may remain upon the apron after leaving the washing roller will be scraped or wiped off by the scraper 42, such particles, as well as any water, falling directly down into the tank or pan, and to provide against the pasty and watery particles being thrown or splashed on to the floor of the apartment, this last mentioned tank is provided with a vertical shield or fence 56. Thus the apron and the roller are always kept clean, and the danger of smearing and spoiling the photographs by the application of paste is entirely eliminated. At the same time the prints are most thoroughly, evenly and permanently secured upon the card board in a convenient and most expeditious manner. As the cards issue from between the apron and the roller they may be grasped by the hand of the operator, or may be left to fall upon a table or other receptacle.

The apron and its washing roller and scraper are employed only for a certain class of work, namely, that in which the edges of the print coincide or nearly reach the edges of the card board, in which case there is liability of the paste offsetting against the upper member of the pasting and pressure appliances.

Where the edges of the print terminate at a distance from the edges of the card board, say for example, half an inch, or even less, there is no liability of the paste being distributed to such upper member, and in doing this class of work I prefer not to use the apron and its associated washing roller and scraper; in which event the roller 13 may co-operate directly with the roller 7 without the intermediate apron, and in practice I make machines specially for both classes of work; that

is to say, machines with the roller 7 and its co-operating member 13, and machines with the roller 7 and its co-operating member 28. In the former I employ of course only one scraper or wiper for the roller 7, and in the latter, in addition to these devices, I employ the apron 28, the apron roller 29, the washing roller 49 and the pan 50.

Various changes in details of construction may be made without departing from the gist of my several improvements.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for mounting prints or the like, the combination of a lower carrier, a washing receptacle therefor, a scraper for removing the paste from said carrier after the washing operation, and an upper carrier co-operating with the lower carrier to feed the print and its mount and to cause the print to adhere to the mount, substantially as set forth.

2. In a machine for mounting prints or the like, the combination of a lower carrier, a washing receptacle therefor, a self-adjusting scraper for removing the paste from said carrier, and an upper carrier co-operating with the lower carrier to feed the print and its mount and to cause the print to adhere to the mount, substantially as set forth.

3. In a machine for mounting prints or the like, the combination of a lower carrier, a washing receptacle therefor, a scraper composed of a pivoted supporting frame, scraping bars and an intermediate rubber strip to bear against said carrier, means for pressing said strip against said carrier, and an upper carrier co-operating with the lower carrier to feed the print and its mount and to cause the print to adhere to the mount, substantially as set forth.

4. In a machine for mounting prints or the like, the combination with an upper traveling member, of a lower roll, a washing receptacle in which said roll revolves, a pivoted scraper for said roll, the cord and pulley, and the spring.

5. In a machine for mounting prints or the like, the combination of a lower carrier, a washing receptacle therefor, a scraper composed of a pivoted frame, scraping bars, securing bolts and an intermediate rubber strip slotted for widthwise adjustments, and an upper carrier co-operating with the lower carrier to feed the print and its mount and to cause the print to adhere to the mount, substantially as set forth.

6. In a machine for mounting prints or the like, the combination of the upper apron, rolls for said apron to travel about, a washing roll for said apron, a receptacle in which said washing roll revolves, and a scraper for said apron, substantially as set forth.

7. In a machine for mounting prints or the like, the combination with an upper traveling apron, of a lower roll, a washing receptacle in which said roll revolves, a scraper for said roll, a washing receptacle for said apron in which said roll revolves, and a scraper for said apron.

8. In a machine for mounting prints or the like, the combination of a pair of rolls arranged one over the other, an apron passing around the upper roll and around a supplemental roll, a washing receptacle beneath the lower roll and in which said roll revolves, a scraper for said roll, a washing roll for said apron, a receptacle in which said last mentioned washing roll revolves, and a second scraper for said apron.

9. In a machine for mounting prints or the like, the combination of the apron, the rolls about which it travels, the roll 7, the washing receptacle therefor, the scraper therefor, the washing roll for the apron, the receptacle for said roll, the sprocket wheel on the shaft of said roll, the sprocket wheel on the shaft of one of the apron rolls, the drive chain, and the scraper for said apron.

10. In a machine for mounting prints or the like, the combination with the roll 7, of the apron, the apron roll 29 hung in movable blocks or slides, a scraper for said apron, means for adjusting said roll 29 and the scraper simultaneously, and means for adjusting said scraper independently of said roll.

11. In a machine for mounting prints or the like, the combination with the roll 7, of the apron, the roll 29 mounted in the blocks or slides, the screws 36 for adjusting said slides or blocks, the brackets 48, the screws 46, and the scraper for said apron connected to said screws; whereby the roll 29 and the scraper may be adjusted together, and the scraper adjusted independently.

Signed at New York city, in the county of New York and State of New York, this 18th day of April, A. D. 1894.

JAMES W. McCABE.

Witnesses:

JACOB FELBEL,
I. C. MACDONALD.