Sept. 26, 1933. J. J. FLANIGAN 1,928,351

STAND FOR DUPLICATING MACHINES AND THE LIKE

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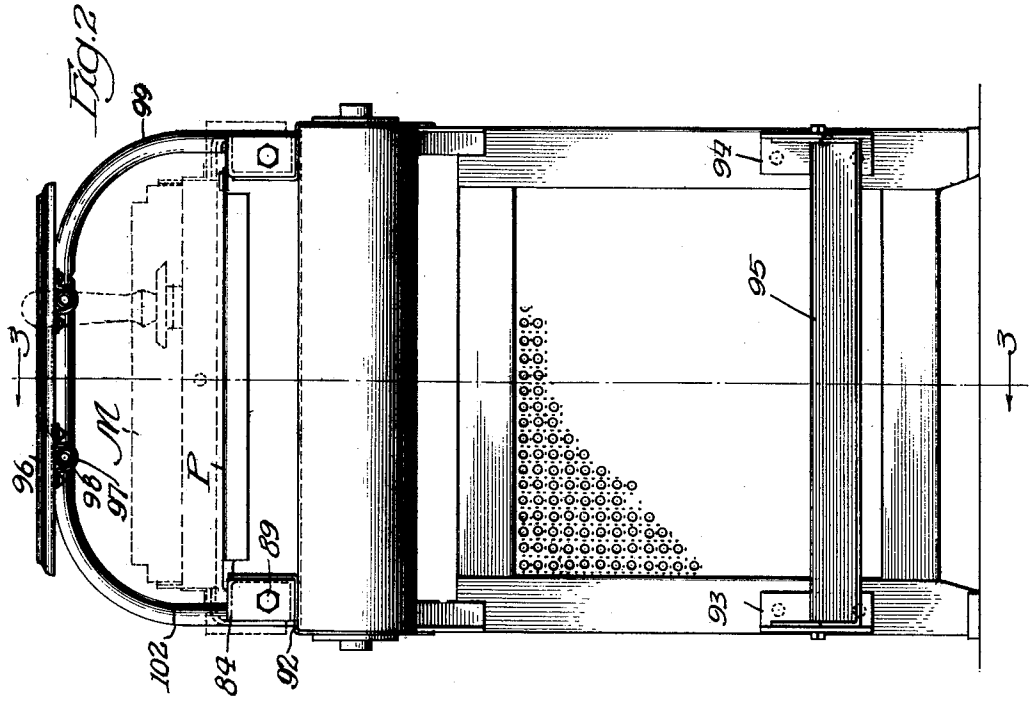


Fig. 2

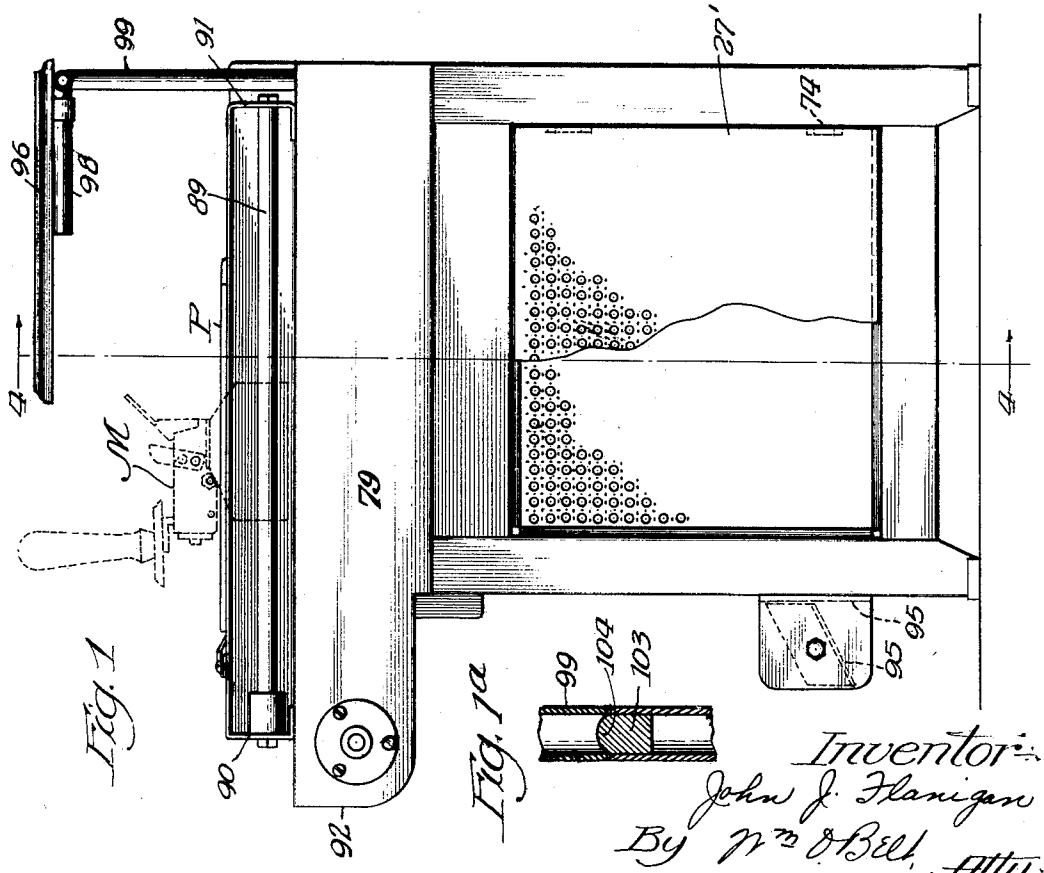


Fig. 1

Fig. 1a

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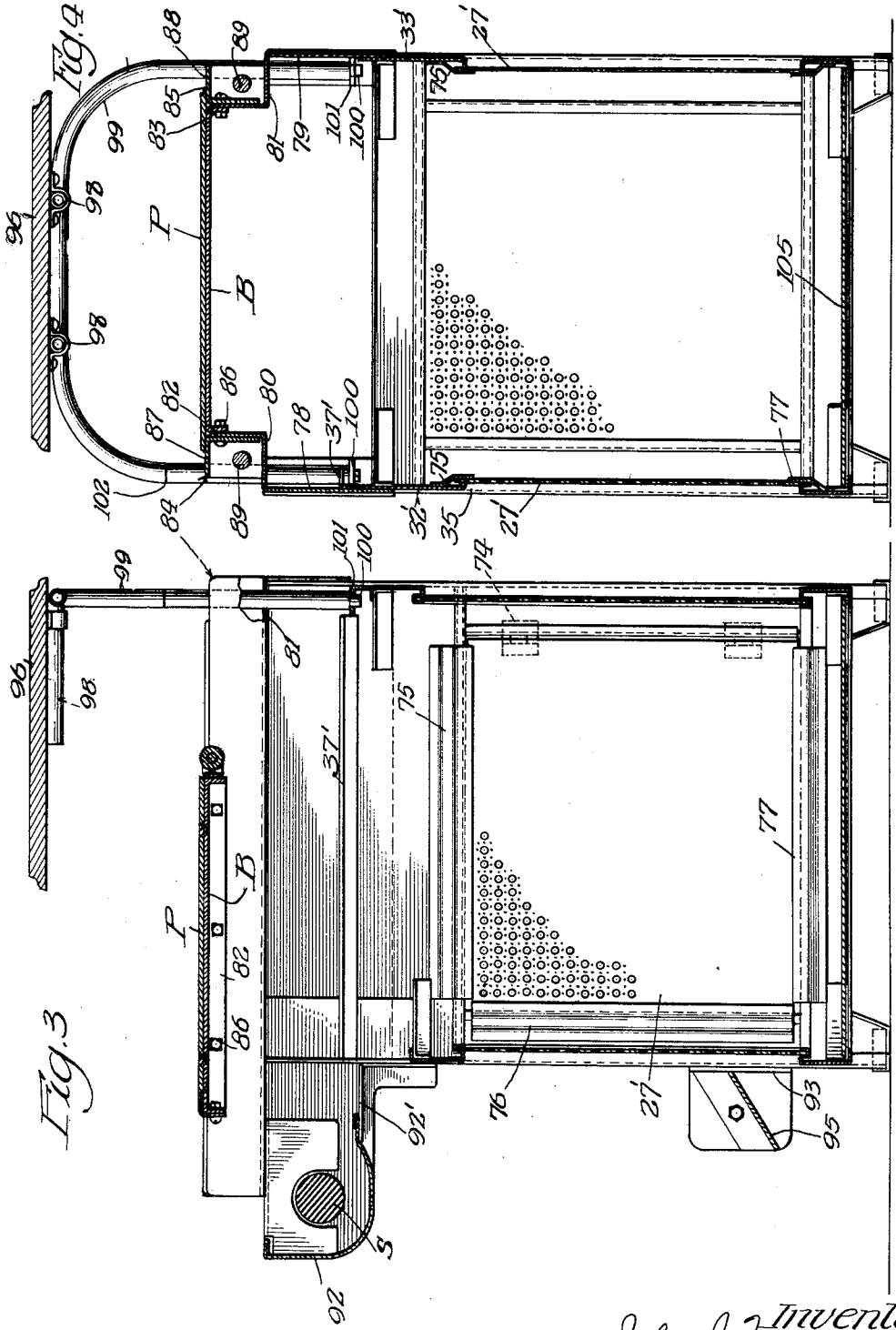


Fig. 3

Fig. 4

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STAND FOR DUPLICATING MACHINES AND THE LIKE

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Fig. 5

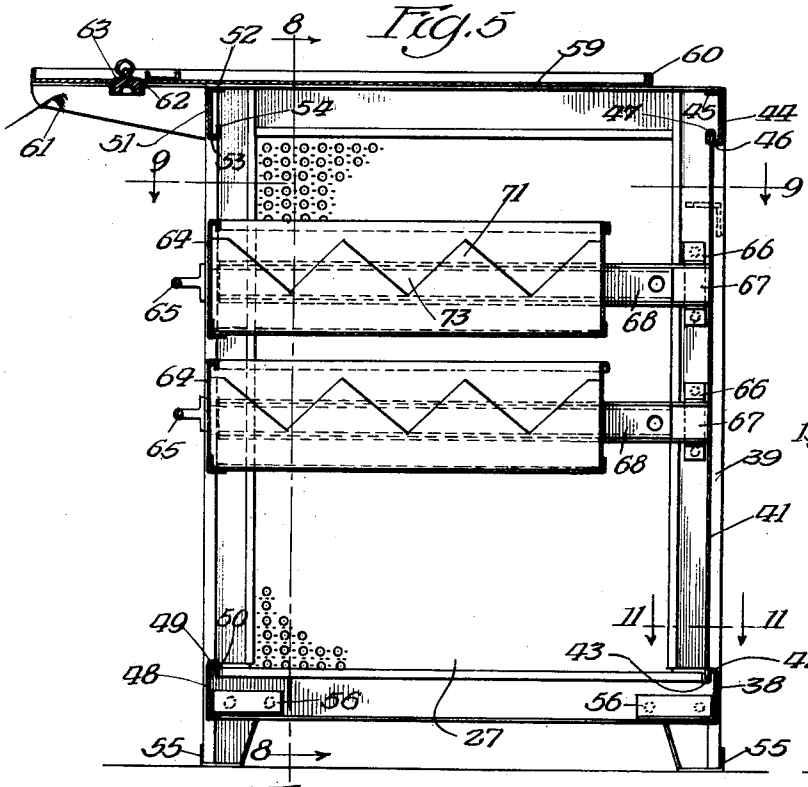


Fig. 6

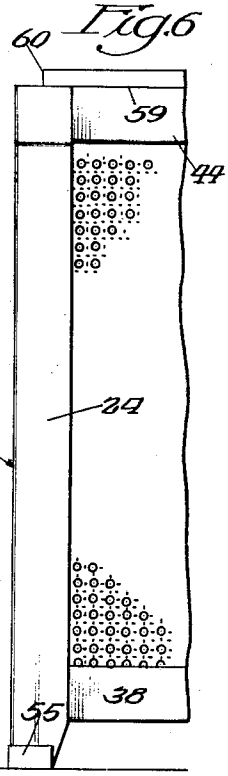


Fig. 7

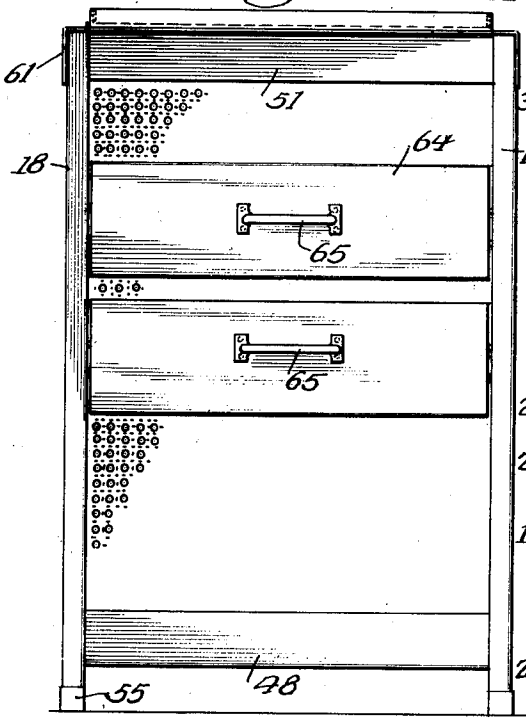
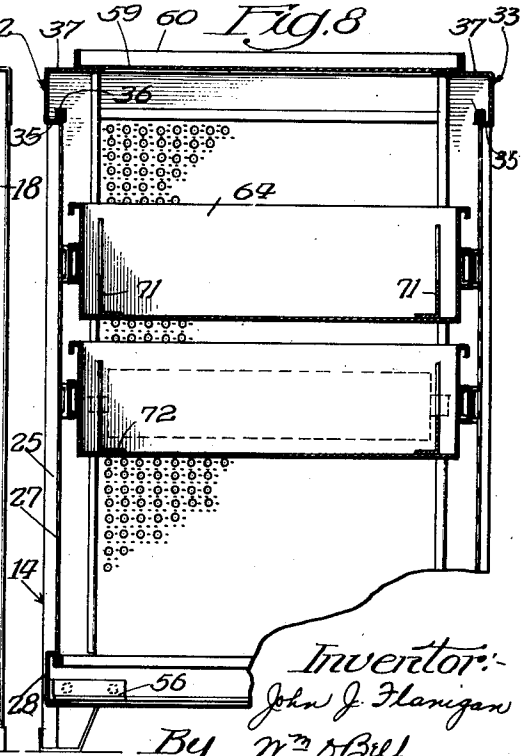


Fig. 8



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STAND FOR DUPLICATING MACHINES AND THE LIKE

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Fig. 9

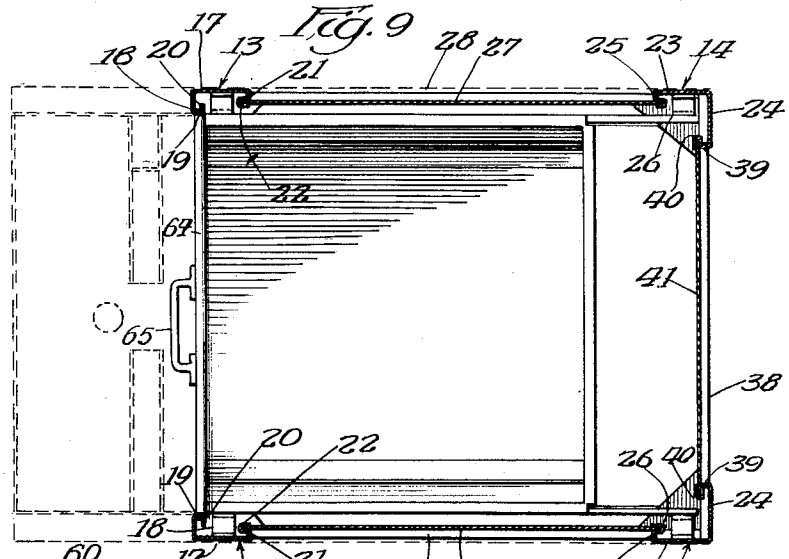


Fig. 10

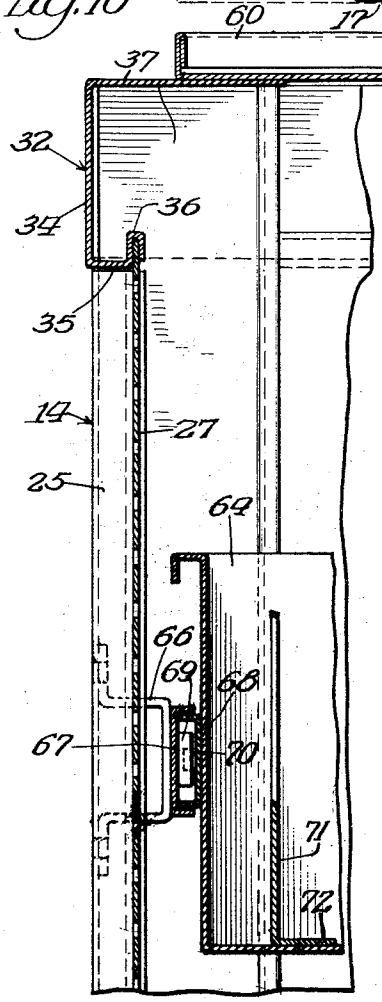


Fig. 11

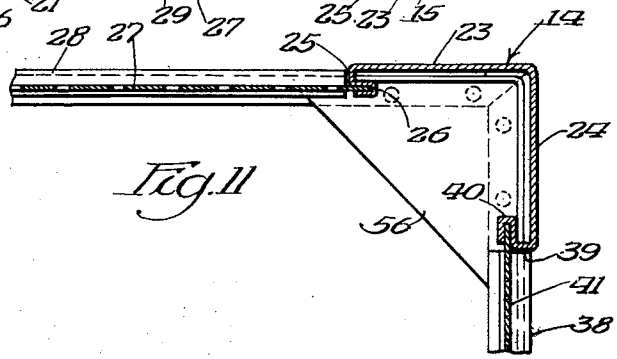
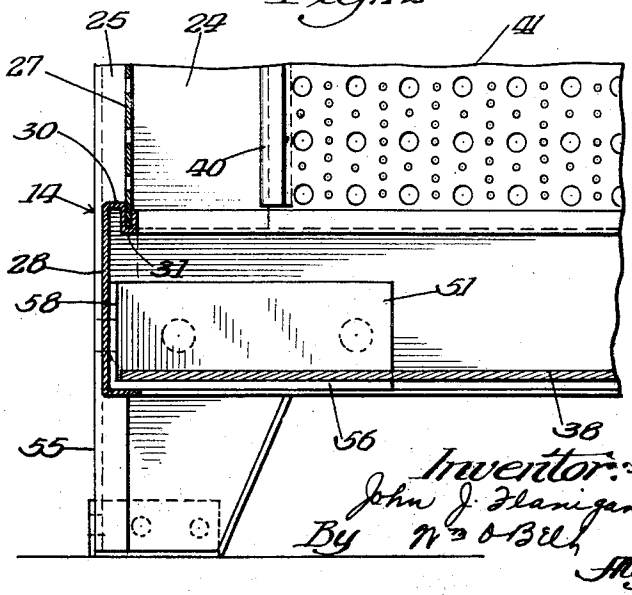


Fig. 12



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Patented Sept. 26, 1933 1,928,351

UNITED STATES PATENT OFFICE

1,928,351

STAND FOR DUPLICATING MACHINES AND THE LIKE

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Application July 30, 1931. Serial No. 553,997

10 Claims. (Cl. 101—133)

This invention relates to certain novel improvements in stands for duplicating machines and the like.

The salient object of the invention is to provide a sturdy stand of simple and economical construction which may be expeditiously manufactured in such a manner that stands for various sized machines may be produced by the use of interchangeable parts.

The invention is particularly adapted for use in connection with duplicating machines operating on the hectograph principle in which machines it is common to moisten the gelatinous substance, which is usually in the form of a band, from which the impressions are made onto sheets applied thereto. The gelatinous band is unwound from a supply roll at the rear of the machine and wound onto a take-up roll at the front of the machine. The band is moistened in use, and prior to being wound upon the take-up roll at the front of the machine, and when wound upon this roll it will be wet.

Another object is to provide a bib about the take-up roll to not only protect the gelatinous band wound on this roll but also to protect the clothing of the operator against contact with the moistened gelatinous band and in this manner soiling of the operator's clothing is prevented.

Another object is to provide in a stand for duplicating machines and the like, a storage arrangement for the rolls of the gelatinous substance when the rolls are not in use, these rolls usually being in a moist condition when introduced into the storage arrangement.

A further object is to collect any moisture which may be extruded from the rolls and also to collect any excess water applied to the gelatinous band when in use in the machine, which water may pass from the machine toward the stand. An object ancillary to the foregoing is to protect the rolls when they are disposed in the storage arrangement to thereby prevent damage to the rolls.

A still further object is to provide a shelf or the like which may be arranged above the machine and to arrange the shelf over the frame to expedite access to the machine as, for example, to facilitate installation and removal of rolls of the gelatinous substance.

A further object of the invention is to provide a stand for a duplicating machine or the like with which a portion of the machine may be integrally connected.

Other and further objects will be made apparent in the following description wherein reference is made to the accompanying drawings in which

Fig. 1 is a side elevation of one embodiment of the stand of my invention;

Fig. 1*a* is a fragmentary detail view of the shelf mounting;

Fig. 2 is a front elevation of the stand as illustrated in Fig. 1;

Fig. 3 is a longitudinal sectional view taken substantially on the line 3—3 on Fig. 2;

Fig. 4 is a transverse sectional view taken substantially on the line 4—4 on Fig. 1;

Fig. 5 is a longitudinal sectional view of another form of stand constructed in accordance with my invention;

Fig. 6 is a fragmentary rear elevation of a corner of the stand illustrated in Fig. 5;

Fig. 7 is a front elevation of the stand illustrated in Fig. 5;

Fig. 8 is a transverse sectional view taken substantially on the line 8—8 on Fig. 5;

Fig. 9 is a horizontal section taken substantially on the line 9—9 on Fig. 5;

Fig. 10 is a sectional detail view, drawn to an enlarged scale, of a portion of the stand as illustrated in Fig. 8;

Fig. 11 is a view taken substantially on the line 11—11 on Fig. 5 and drawn to an enlarged scale; and

Fig. 12 is a sectional detail view, drawn to an enlarged scale, and illustrating the construction of a lower corner of my novel stand.

In the accompanying drawings wherein I have illustrated selected embodiments of my invention, and referring more particularly to Figs. 5 to 12, inclusive, 13, 14, 15 and 16 indicate the corner members of my improved stand. The corner members 13 and 16 include flat sections 17 disposed at the sides of the stand. These flat sections 17 are unitary with right angularly extending sections 18, disposed at the front of the stand and terminating in rearwardly extending facing sections 19, have flanges 20 thereon extending toward the side sections 17. At the ends of the side sections 17 opposite the front sections 18 are inwardly extending flanges 21 terminating in substantially U-shaped portions 22. The corner members 14 and 15 include sections 23 disposed at the sides of the stand and right angularly extending sections 24 disposed at the rear of the stand. At the ends of the sections 23 opposite the sections 24 are inwardly extending flanges 25 terminating in substantially U-shaped portions 26. The U-shaped portions 26 are aligned with the U-shaped portions 22 and between the limbs

thereof the edges of panels 27 are disposed. These panels 27 are in the form of flat metal sheets preferably perforated and otherwise formed to simulate woven cane. Extending between the corner members 13 and 14 and 16 and 15 and spaced from the lower ends of these corner members and arranged inwardly thereof are lower side rails 28 and 29, the ends of these rails extending substantially to the sections 18 and 24, the flanges 21 and 25 being cut away to provide clearance for these rails. The lower rails 28 and 29 are spot welded at their ends to the corner members, and these lower rails each include an inwardly extending flange 30 terminating in substantially U-shaped portions 31 receiving the lower ends of the panels 27. Extending between the corner members 13 and 16 and 14 and 15 at the upper ends are upper side rails 32 and 33 which, as best illustrated in Fig. 10, include side facings 34 having inwardly extending flanges 35 along the lower edges thereof terminating in substantially U-shaped portions 36 receiving the upper ends of the panels 27. The ends of the rails 32 and 33 are disposed outwardly of the side sections of the corner members and are joined thereto by spot welding. The side rails 32 and 33 have at the upper ends thereof inwardly extending horizontal portions 37. From the foregoing it is manifest that two opposite side frame members are provided. Extending between the corner members 14 and 15 adjacent the lower ends thereof is a lower rear rail 38, the ends of which are spot welded to the rear facings of the rear sections 24 of the members 14 and 15. The rear sections 24 of these members 14 and 15 include inwardly extending flanges 39 which terminate in substantially U-shaped sections 40 that embrace the side edges of the rear panel 41 substantially similar to the panels 27. The lower rail 38 has an inwardly extending flange 42 along the upper edge thereof which includes a U-shaped portion 43 that embraces the lower edge of the rear panel 41. Extending between the corner members 14 and 15 at the upper ends thereof is a rear upper rail 44, the ends of which are spot welded to the rear facings 24 of the corner members 14 and 15. The rail 44 has a horizontal flange 45 along the upper edge thereof which extends below the horizontal portions 37 of the upper side rails 42 and 43. Along the lower edge of the rail 44 is an inwardly extending flange 46 terminating in a substantially U-shaped portion 47 which embraces the upper edge of the rear panel 41. A front lower rail 48 extends between the corner members 13 and 16 adjacent the lower ends thereof and the ends of this rail are spot welded to the front sections 18 of these corner members. Along the upper edge of the lower rail 48 is an inwardly extending flange 49 terminating in a downwardly extending flange 50. Extending between the corner members 13 and 16 adjacent the upper ends thereof is the upper front rail 51, the ends of are spot welded to the front sections 18 of the corner members 13 and 16. Along the upper edge of the rail 51 is an inwardly extending horizontal portion 52. Along the lower edge of the rail 51 is a horizontally extending flange 53 terminating in an upwardly extending flange 54. The opposite side frame members are interconnected by the front and rear upper and lower rails and as the various parts are united by spot welding, a unitary rigid frame results. The lower ends of the corner members are formed to provide foot portions and suitable angle brackets 55 are arranged at the lower ends to provide pads on which the stand rests. At each of the lower corners a gusset plate 56 is provided of substantially right angle triangular shape and along the edges meeting at right angles, side flanges 57 and 58 are provided. These side flanges are spot welded to the adjacent faces of the lower rails and the gusset plates 56 are therefore united to the stand and one function of these gusset plates is to reenforce the stand. A stand constructed in the foregoing manner will be rigid and of pleasing appearance. When the stand is to be used for duplicating machines of different widths, upper, and lower front and rear rails of proper length, corresponding to the width of the machine, are employed and hence the stand may be made of a width to correspond to the width of the machine. If desired, the lengths of the side rails may be similarly varied to accommodate machines of different lengths.

Rested on the horizontal portions 37 is a supporting pan 59 having an upstanding peripheral flange 60. The pan 59 is preferably spot welded in position and includes a portion which extends beyond the front of the stand, as best illustrated in Fig. 5, and this forwardly extending portion may be reenforced by brackets 61 either formed as continuations of the upper side rails or in the form of separate pieces suitably joined to the side rails. In this forwardly extending portion of the pan 59 is a flanged opening 62 normally closed by a removable plug 63. The duplicating machine is rested on the pan 59 and any water dripping from the machine is collected in this pan from which it may be easily drained through an opening 62 after the plug 63 has been removed. As has been stated, the stand is arranged to provide a storage space for the rolls of the gelatinous band. When these rolls are not in use in the machine and in the embodiment of the invention illustrated in Figs. 5 to 12, drawers 64 are provided for storing such rolls. Any number of these drawers may be provided and in the present instance there are two. The drawers have handles 65 to expedite sliding movement thereof to and from the stand and these drawers are supported for sliding movement in the following manner: Secured to the side sections of the corner members on each side of the machine are angle clips 66 and extending between angle clips on the same side of the machine is an inwardly opening channel strip 67. Secured to the sides of the drawers 64 are outwardly opening channel strips 68, the limbs of which are arranged between the limbs and inwardly opening channel strips 67 and therefore the channel strips 68 may slide through the channel strips 67. The forward ends of the drawers extend past the opposite ends of the channel strips 67 and limit inward sliding of the drawers. To limit outward sliding of the drawers, a lug 69 is struck from the channey strip 67 and a lug 70 is struck from the channel strip 68. These lugs may be so disposed that when one of the drawers 64 has been slid from the stand in the desired amount, these lugs will interengage to limit further movement. In each of the drawers 64 and extending between the front and rear walls thereof and in spaced relation with the side walls are strips 71 having foot portions 72 suitably joined to the bottom of the drawers. As best illustrated in Fig. 5, these strips 71 have the upper edges thereof serrated to provide depressions 73 and the ends of the spindles of the rolls of the gelatinous substance band may be disposed in these depressions to

thereby support the rolls in the drawers, the depressions 73 on opposite sides of the drawers being aligned. The drawers are provided with solid bottoms and consequently any moisture extruded from the rolls will be collected in the drawers and any excess moisture dripping from the machine will be collected in the pan 69 and in this manner water will be prevented from collecting on the floor around the stand.

A stand constructed in substantially the foregoing manner is illustrated in Figs. 1 to 4, inclusive. Herein, however, no storage drawers are provided but it is intended that the rolls of the gelatinous bands shall be mounted in a conveyor, for example of the kind disclosed in my Patent No. 1,703,140, patented February 29, 1929. In order to afford access to the conveyor which will be arranged in the frame, the panels 27' are hinged at 74 onto the rear corner members and to limit inward movement of these panels or doors 27', strips 75 are secured to the inner faces of the side rails 32' and 33', and these strips close access to the channels inwardly of the flanges 35 and include portions that extend beyond these flanges 35 to provide stops for the doors. Strips 76 and 77, similar to the strip 75 and having the same utility, are secured to the other side rails except those on which the doors are hinged. There are other slight modifications in the construction of the stand illustrated in Figs. 5 to 12 and the most important of these differences reside in the formation of the upper side rails 32' and 33'. In this construction, the upper side rail 32' has a horizontally extending portion 37' along the upper edge thereof which is disposed in a plane above the upper edges of the front and rear rails. No flange is provided along the upper edge of the rail 33' and the upper edge of this rail terminates above the plane of the upper edges of the front and rear rails but below the plane of the horizontally extending portion 37'. Auxiliary upper side rails 78 and 79 are spot welded to the side rails 32' and 33' and have horizontally extending portions 80 and 81 along the upper edges thereof which terminate in vertically extending portions 82 and 83, thereby providing outwardly opening substantially L-shaped portions on each side of the machine. Angle strips 84 and 85 are mounted in these outwardly opening L-shaped portions and have the vertically extending limbs thereof joined to the vertically extending portions 82 and 83. A rigid plate B including depending peripheral flanges is arranged between the vertically extending portions 82 and 83 and is joined thereto by bolts 86 or the like and the upper surface of the plate B is disposed substantially in alignment with the horizontal outwardly extending portions 87 and 88 of the angle strips 84 and 85. Thus, a pad P may be riveted or otherwise secured to the upper surface and the gelatinous band is directed across this pad P. The duplicating machine M includes a depending portion carrying rollers adapted to travel on one of the rods 89, which are supported between end members 90 and 91 of the strip 85, at the right side of the machine as viewed in Fig. 2, and the machine also includes rollers which travel on a trackway provided by the horizontal portion 87 and therefore the carriage of the machine may be reciprocated back and forth across the pad P on which the gelatinous band is arranged. The auxiliary upper side rails 78 and 79 extend forwardly of the stand, as best illustrated in Fig. 1, and have a bib 92 secured thereto, which bib extends across the front of the machine, as illustrated in Fig. 2. The take-up spindles are mounted in the space enclosed between the bib 92 and the forwardly extending portions of the upper side rail, and thus any moisture dripping from the gelatinous band being wound on the take-up spindle will be collected in this bib which is of sufficient height and proper configuration to prevent the clothing of the operator of the machine from coming in contact with this gelatinous band. On the front corner members, angle brackets 93 and 94 are spot welded, between which a strip 95 extends, which provides a foot rest for the operator of the machine.

In the two illustrated embodiments of the stand it is advantageous to provide a shelf or the like above the machine on which paper or other articles may be arranged. The mounting for such a shelf is included in the embodiment illustrated in Figs. 1 to 4, but a similar arrangement might just as well be provided in the embodiment illustrated in Figs. 5 to 12. Such a shelf is indicated by 96 and has clamp members 97 on the lower side thereof which embrace fingers 98 projecting from the tubular arch-shaped support 99. The tubular support 99 is directed through the horizontally extending portion 81 and has a plug 100 of reduced size at the lower end thereof which enters an opening in the bracket 101 carried by the adjacent upper side rail. If desired, the tubular support may be of substantially U-shaped formation and the other end thereof may be secured in position in the manner described. However, I prefer to divide the tubular support in the manner illustrated in Figs. 2 and 4 so that the shelf 96 may be swung over the bed of the machine to facilitate the installation and removal of rolls of the gelatinous substance, especially in machines of the type used with the stand illustrated in Figs. 5 to 12, one such machine being illustrated and described in my copending application, Serial No. 565,283, filed September 26, 1931. By reason of the extent of the tubular support 99 through an opening in the horizontal portion 91 and the extension of the plug 100 thereon into an opening in the bracket 101, it is manifest that the shelf may be pivoted on this leg of the support 99 and to this end the tubular support is divided at 102. A plug 103 (Fig. 1a) is provided in the fixed portion below the division 102 and includes a node 104 over which the adjacent end of the tubular support above the division 102 may pass so that the node may extend into the tubular support to thereby retain the shelf in position. It is therefore apparent that the shelf is retained in position on an arch-shaped frame having one long leg which is pivotally mounted and a short leg adapted to engage retaining means provided by the node 104 to thereby retain the shelf in position.

In the embodiment of the invention illustrated in Figs. 1 to 4 wherein the stand adapted to have a conveyor mounted therein is shown, the moistened rolls will move onto the conveyor as they are disengaged from the machine and to prevent moisture dripping from these rolls onto the floor, a drip pan 105 is arranged at the lower end of the stand and is removably rested on the gusset plates 56, and any moisture passing from the rolls will be collected in this drip pan which covers the entire bottom of the stand. This drip pan in cooperation with the bib 92 and the extension 92' thereof sufficiently covers the bottom of the machine so that any water dripping from

the machine will be collected. Access to the drip pan may be had by opening the doors 27'.

While I have illustrated and described selected embodiments of my invention, it is to be understood that this is capable of variation and modification and I therefore do not wish to be limited to the precise details set forth but desire to avail myself of such changes and alterations as fall within the purview of the following claims.

I claim:

1. A stand for duplicating machines and the like including four corner members, rails extending between adjacent of said corner members and spot welded thereto to provide a rigid frame, panels disposed between cooperating rails and corner members to cover the area enclosed by said rails and corner members, said rails and corner members having flat outwardly disposed faces and flanges extending at right angles to the flat outwardly disposed faces and toward the inside of the stand, clamping portions at the inner ends of the flanges and disposed behind said outwardly disposed faces and embracing the edges of said panels to retain said panels in position.

2. In a stand for a duplicating machine or the like, corner members including flat sections each disposed at a side of the stand, said corner members including inwardly extending portions at the inner edges of said flat sections and substantially U-shaped portions at the ends of the inwardly extending portions, said U-shaped portions being arranged inwardly of and disposed behind the flat sections, rails extending between the flat sections of said corner members at the upper and lower ends thereof and including flat faces each disposed at a side of the stand and also including inwardly extending portions having U-shaped portions at the inner ends thereof disposed inwardly and behind the flat sections, and a panel retained in said U-shaped sections and covering the area enclosed by said corner members and rails.

3. In a stand for duplicating machines and the like including a rigid frame having supporting means at the lower end thereof, a drip pan rested on said supporting means, forwardly extending portions at the upper end of said stand, a bib carried by said forwardly extending portions and providing a water-collecting trough, said trough and said pan collecting any water dripping from the machine toward said stand to prevent passage of said water onto the floor about said stand.

4. In a stand for duplicating machines and the like, corner members, rails extending between the upper and lower corners of said corner members and secured thereto to provide a rigid frame, supporting members adjacent said corner members and aligned with the rails at the lower ends thereof, a drip pan removably mounted on said supporting members, said corner members and rails defining openings at the sides of the stand, means secured to said corner members and rails covering certain of the openings defined by said corner members and rails, a door for closing one of the openings defined by said corner members and rails, means hingedly connecting said door to one of the adjacent corner members, and strips secured to the adjacent rails and including offset portions extending beyond the inwardly disposed edges of these rails, said offset portions providing stops to position said door in closing position relative to said opening, said door being moved from closing position to afford access to said drip pan.

5. In a stand for duplicating machines and the like, corner members and rails joined together to provide a rigid frame, the rails at opposite sides at the upper end of the stand including upwardly extending portions, angle strips secured to said upwardly extending portions and providing a frame for the machine or the like, and means secured to said upwardly extending portions for supporting a bed plate for the machine or the like.

6. In a stand for duplicating machines and the like, corner members and rails joined together to provide a rigid frame, angle strips secured to certain of said rails providing a frame for the machine, means secured to said certain rails for supporting the bed plate for said machine, and a pad on said bed and extending over said certain rails.

7. In a stand for duplicating machines and the like, corner members, upper and lower side rails extending between adjacent of said corner members and joined thereto, upper and lower front and rear rails extending between adjacent of said corner members and joined thereto, means carried by said upper side rails for supporting a bed for the duplicating machine or the like, a guide rail for the machine mounted on the means for supporting the bed, said means providing a trackway for said machine, and a bed plate for the machine supported by and between said means.

8. In a stand for duplicating machines and the like, a machine supporting portion, a shelf disposed in a plane above said machine supporting portion, and an arch-shaped frame supporting said shelf and pivotally connected to said stand to permit movement of said shelf over said machine supporting portion to facilitate access to a machine mounted on said portion.

9. In a stand for duplicating machines and the like, a machine supporting portion, a shelf supported in a plane above said machine supporting portion, a frame for supporting said shelf and including a leg pivotally connected to said stand, said frame having another leg engageable with a member carried by said stand for limiting pivotal movement of said frame and said shelf over said machine supporting portion.

10. In a stand for duplicating machines and the like, a machine supporting portion, a shelf supported in a plane above the machine supporting portion, an arch-shaped frame for supporting said shelf and including a leg pivotally connected to said stand, said frame including another leg embodying a portion fixed to the stand and including retaining means, said other leg including another portion extending toward the first-named portion and adapted to engage said retaining means to position said shelf above said machine supporting portion.

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