2 Sheets—Sheet 1.

W. C. MACBRAIR.

Machine for Glossing Labels, Show-Cards, &c

No. 198,642. **Patented Dec. 25, 1877.**

Fig. 1.

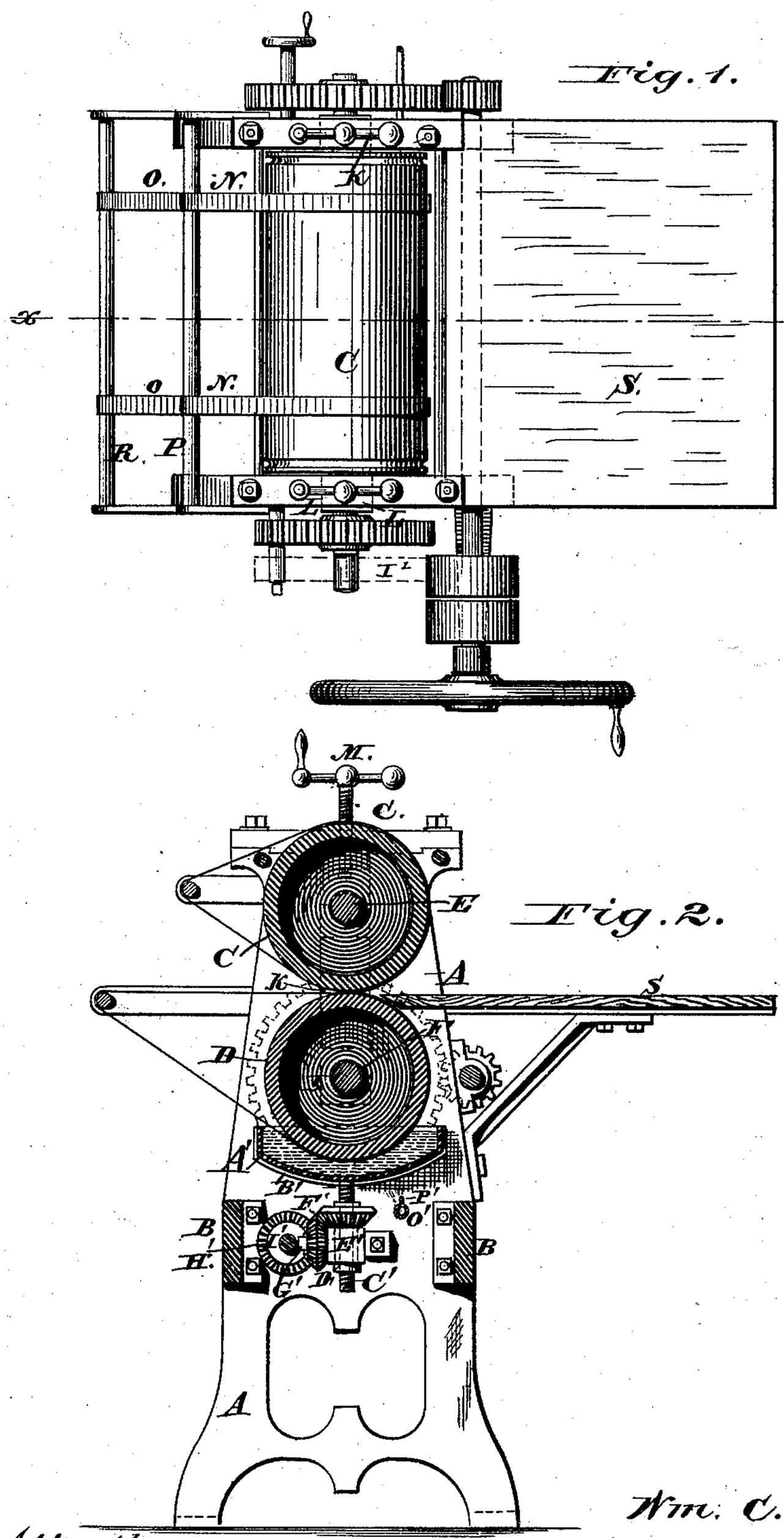
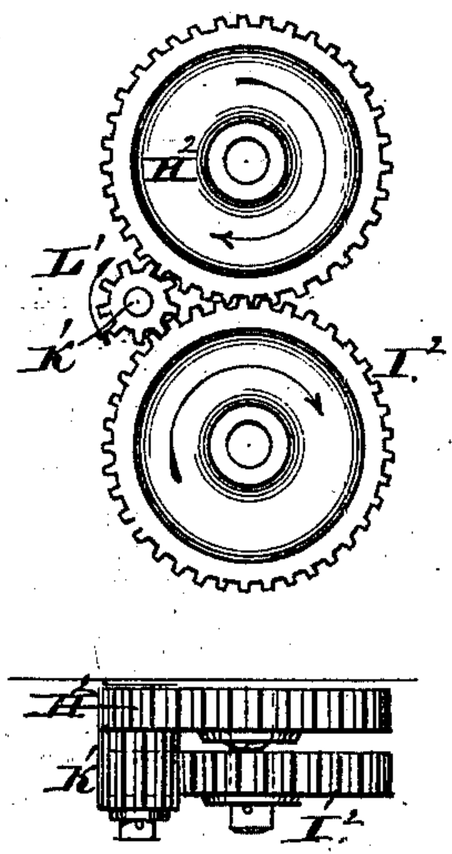


Fig. 2.

Fig. 3.



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Atty.

2 Sheets—Sheet 2.

W. C. MACBRAIR.

Machine for Glossing Labels, Show-Cards, &c.

No. 198,642. **Patented Dec. 25, 1877.**

Fig. 4.

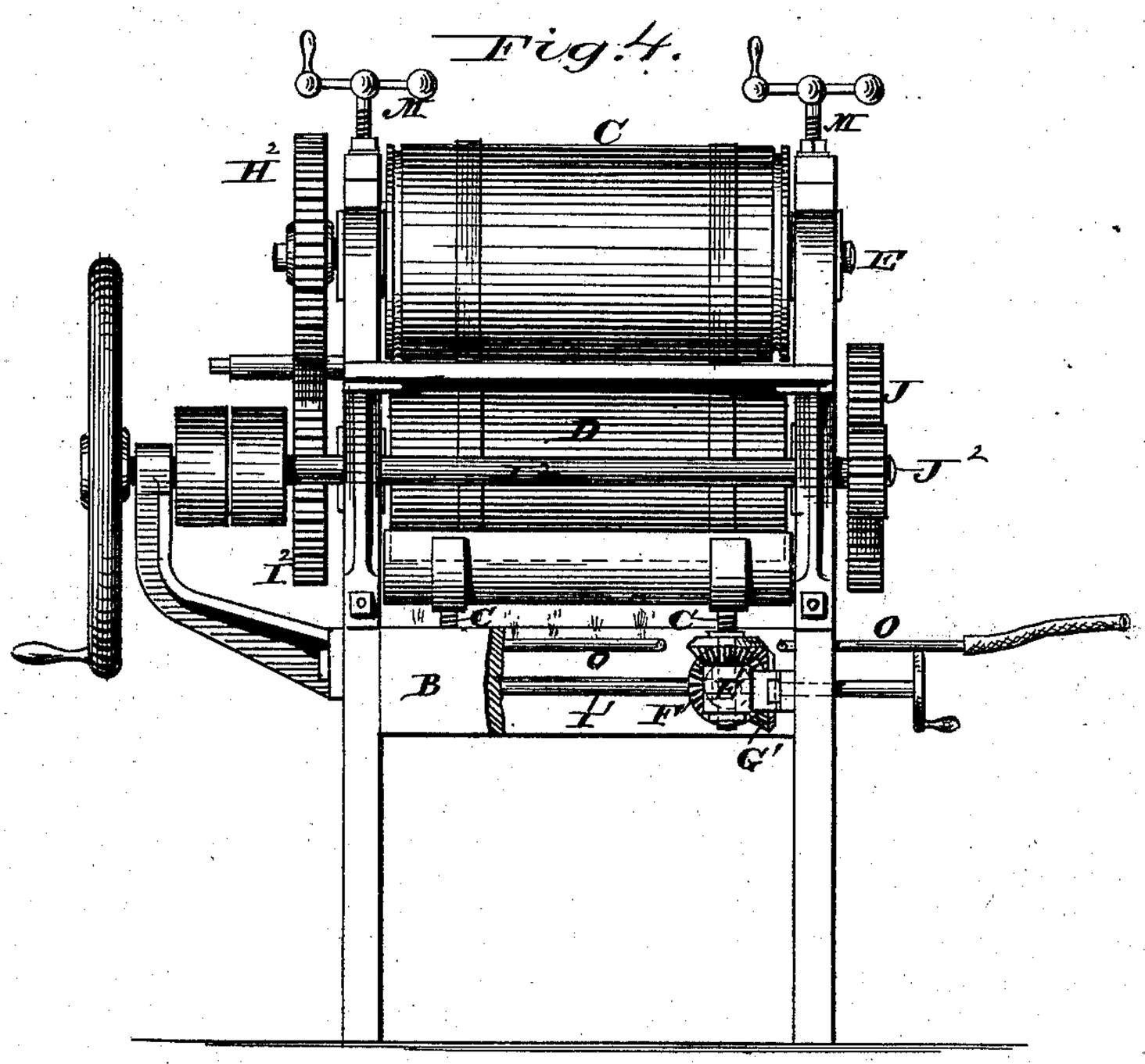
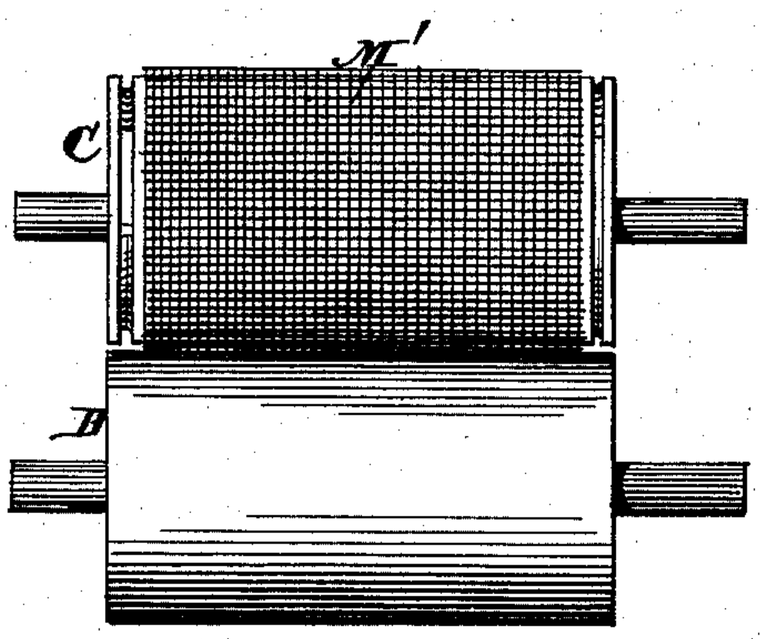


Fig. 5.



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Atty.

UNITED STATES PATENT OFFICE.

WILLIAM C. MACBRAIR, OF CINCINNATI, OHIO, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO ARCHIBALD MACBRAIR AND ARCHIBALD MACBRAIR, JR., OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR GLOSSING LABELS, SHOW-CARDS, &c.

Specification forming part of Letters Patent No. **198,642,** dated December 25, 1877; application filed November 10, 1877.

To all whom it may concern:

Be it known that I, WILLIAM C. MACBRAIR, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Machines for Glossing Labels, Show-Cards, Chromos, &c., of which the following is a specification:

This invention relates to an improved machine for glossing labels, show-cards, chromos, and other like articles, its object being to provide a means for giving such articles a uniform highly-glazed and finished surface, which will resist the action of the atmosphere and moisture, and prevent in a great measure the adhesion of dust and dirt, and provide for the ready washing or cleansing of the articles.

To this end my invention consists, first, in two horizontal rollers mounted upon shafts journaled in suitable standards, and geared together by means of cog-wheels, the lower roller being adapted to rotate in a vertically-adjustable pan, the rollers being arranged to rotate in contact with each other, so as to thoroughly distribute the glossing compound over their peripheries previous to the passage of the labels or other article between them, and in contact with the surfaces of a folded sheet of such labels or articles when the same is passed between said rollers, so as to uniformly transfer the glossing compound to said sheets, as more fully hereinafter set forth; second, in the combination, with the rollers and the adjustable pan, of one or more gas pipes and burners located below the pan, whereby the apparatus is adapted to be employed as a sizing-machine when desired; third, in the combination with the lower roller of a pan for containing the glossing or sizing compound, of two supporting-bands mounted upon adjusting-screws, and a series of miter-gear wheels and a shaft for operating the same, whereby the pan may be adjusted with respect to the lower roller; fourth, in the combination, with a fixed cog-wheel and an adjustable cog-wheel mounted on the shafts of the rollers, of a detachable pinion, whereby the rollers may be set to dress each other, as more fully hereinafter specified; fifth, in the combination, with the upper roller, of a detachable wire-gauze casing, to adapt the machine to embossing purposes, as more fully hereinafter specified.

In the drawings, Figure 1 represents a top view of my improved machine; Fig. 2, a transverse vertical section of the machine; and Fig. 3, a sectional view of the apparatus, showing an attachment by means of which the surfaces of the rollers may be trued up when worn. Fig. 4 represents a front elevation of my machine, and Fig. 5 a detached view of the roller and wire-gauze casing for embossing.

The letter A represents two vertical standards, secured together by transverse braces B′, or in any other suitable manner.

The letters C and D represent two horizontal rollers, of suitable size, constructed preferably of metal, and mounted upon the shafts E and F, journaled in adjustable boxes H and I, located in vertical slotted guides or ways K L in the upright standards.

The letter M represents two binding-screws, one bearing upon each of the upper journal-boxes, by means of which the rollers are adjusted to bear with proper force against each other.

The journals E F project at one side beyond the upright standards, and are provided with intermeshing cogged gear-wheels H^2 I^2.

The opposite end of the lower shaft projects similarly, and is provided with a similar cog-wheel, J, which meshes with a pinion, J^1, on the transverse driving-shaft J^2, journaled in bearings on the opposite standards. One end of said driving-shaft is provided with a fly-wheel and crank when the apparatus is to be operated by hand, or with fast and loose pulleys when it is to be operated by power.

The letters N and O represent a series of tapes passing over the respective rollers and the smaller rollers or pulleys P and R, by means of which the sheets are discharged from the machine after glossing; and S, a horizontal table or shelf located in front of the rollers at their intersection, upon which the sheets are placed preparatory to being glossed.

The letter A′ represents a horizontal pan, located directly below the lower roller, in ad-

justable supports or bands B′, mounted upon vertical screws C′, passing through the hollow internally-threaded pivots D′, which are journaled in boxes E′, formed on or secured to the upright standards. Said miter-wheels engage one series of teeth of the double miter-gear wheels F′, loosely mounted on shafts G′, projecting from the boxes E′, the opposite series of teeth of said double miter-gear meshing with the miter-gears H¹, mounted on a transverse horizontal shaft, I¹, journaled in the upright standards, and provided at one end with a hand-wheel, by which it may be turned.

In order to provide for readily dressing or truing up the rollers when they become worn from use, the lower gear-wheel I² is so mounted on its journal as to have a slight longitudinal movement thereon, so that it can be thrown out of gear with the upper wheel H² when desired.

The letter K′, Fig. 3, represents a short journal projecting from one of the standards at one side of the cog-wheels on a line with their intersection, and L′ a detachable pinion of such width that when placed on said journal it will intermesh with the two cog-wheels, and cause the rollers to travel in contact with each other in opposite directions, so as to grind the surfaces and dress or true them up when worn.

In Fig. 5 the letter M′ represents a cylinder constructed of wire gauze or cloth, of such size as to fit neatly upon the upper roller, and which can be slipped in place upon said upper roller when the same is detached from its bearings. The roller, as thus provided with the wire-gauze casing, when again secured in place, serves as an embossing-roller for embossing chromos.

In order to prevent the glossing compound from escaping at the ends of the rollers and dripping down upon the machine and the floor of the room in which it is located, both rollers are provided with an annular groove, N′, at or near each end, by means of which the superfluous compound is returned to the pan from which it was taken, thus not only preventing the soiling of the machine and surrounding objects, but resulting in a material saving of the compound.

In order to adapt the apparatus to be employed as a sizing-machine, one or more gas-pipes, O′, having jets or burners P′, are arranged directly under the adjustable pan, whereby the size in the pan can be kept warm and fluid during the process.

The operation of my machine is as follows: Being in proper order, and the pan properly filled with the glossing compound, the articles to be glossed are placed upon the horizontal shaft or table. Upon motion being imparted to the rollers, they are allowed to revolve in contact until the glossing compound is uniformly distributed over their surfaces, the lower roller taking up such compound out of the pan in which it dips and transferring it to the upper roller. The sheets upon which are printed the labels, show-cards, or chromos have the designs arranged in parallel groups, so that when such sheets are folded in the middle one group will be exposed on each side of said folded sheet. The sheets as thus folded are fed in between the rollers, and are coated with the glossing compound, the upper roller coating one side and the lower roller the other side, of said folded sheet.

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

1. The combination, in a machine for glossing labels, show-cards, chromos, and other like articles, of the two horizontal rollers journaled in the upright standards, and revolving in contact with each other, and the adjustable pan containing the glossing compound, in which the lower roller dips, the whole constructed to operate substantially as specified.

2. The combination, with the rollers and the adjustable pan, of one or more gas pipes and burners located below the pan, whereby its contents may be heated to adapt the machine to be employed for sizing, substantially as specified.

3. In combination with the lower roller and the pan for containing the glossing compound, the bands or supports, the screws upon which they are mounted, and the mitered gearing and shaft for operating the same, substantially as specified.

4. In combination with the fixed cog-wheel of the upper roller and the adjustable cog-wheel of the lower roller, the detachable pinion, adapted to gear with said cog-wheels, for the purpose of rotating the rollers in opposite directions in order to dress their surfaces, substantially as specified.

5. In combination with the upper roller of the machine, the detachable casing of wire cloth or gauze, whereby said roller may be adapted to serve as an embossing-roller, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

WILLIAM C. MACBRAIR.

Witnesses:

ALBERT H. NORRIS,

J. A. RUTHERFORD.