(No Model.) 3 Sheets—Sheet 1.

G. W. GARNAR.

EMBOSSING MACHINE.

No. 265,057. Patented Sept. 26, 1882.

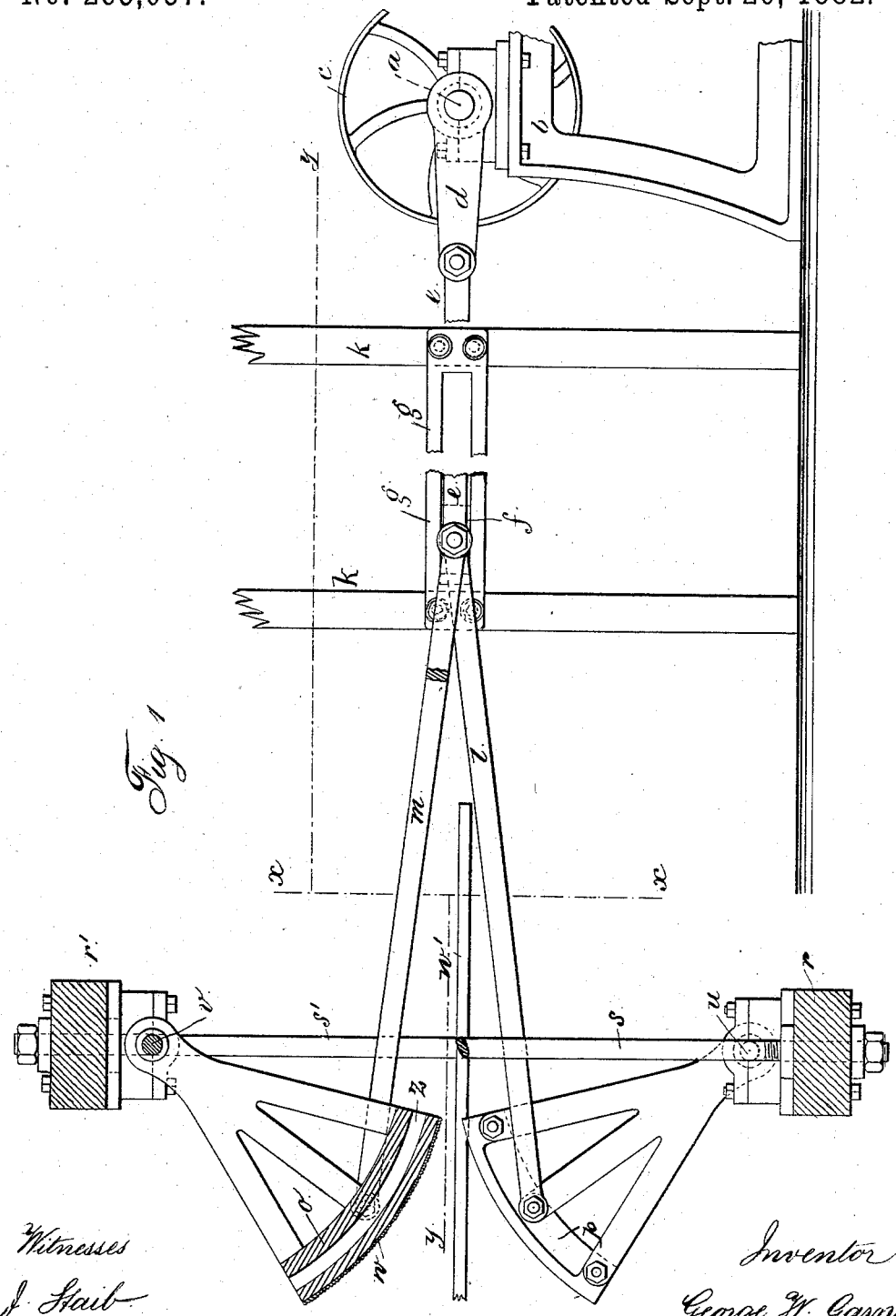

Fig. 1

Witnesses
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Chas. H. Smith

Inventor
George W. Garnar
per Lemuel W. Serrell
Atty.

(No Model.) 3 Sheets—Sheet 2.

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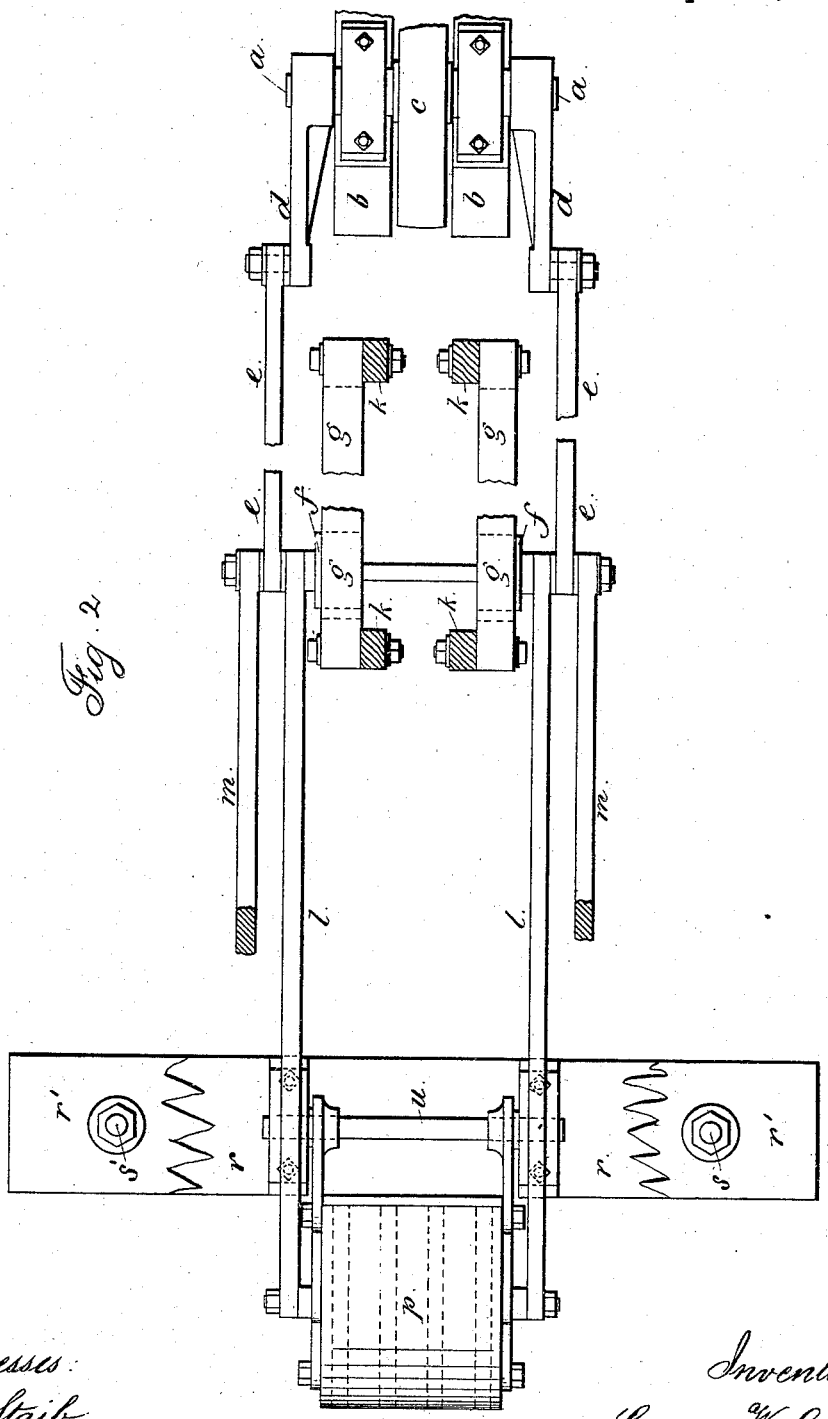

Fig. 2.

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(No Model.)

3 Sheets—Sheet 3.

G. W. GARNAR.

EMBOSSING MACHINE.

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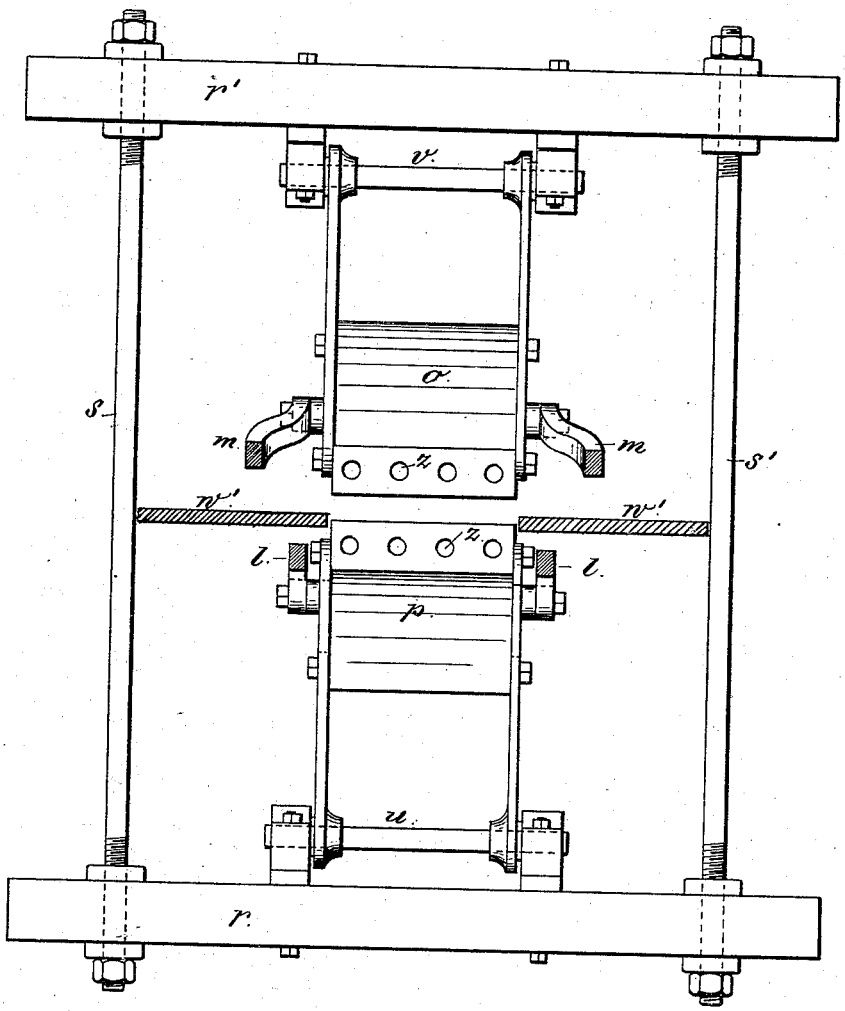
Fig. 3



Witnesses:
J. Staib
Chas. H. Smith

Inventor
George W. Garnar
per Lemuel W. Serrell Atty

UNITED STATES PATENT OFFICE.

GEORGE W. GARNAR, OF FLUSHING, NEW YORK.

EMBOSSING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 265,057, dated September 26, 1882.

Application filed August 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GARNAR, of Flushing, in the county of Queens and State of New York, have invented an Improvement in Embossing-Machines, of which the following is a specification.

Before my invention the surfaces of leather, book-binders' muslin, and other materials had been embossed by the action of rollers and by flat plates applied in successive impressions; but in consequence of the great force required the rollers were liable to spring and make the impression imperfect, and with flat plates the operation could not be done except in a very powerful press and very slowly.

My invention is made for applying an embossing-plate that is a segment of a cylinder, and hence acts with a rolling motion, and I arrange the parts in such a manner that the leather, skin, or other sheet material can be of any desired size, and acted upon conveniently and by successive impressions to emboss the entire skin or material.

In the drawings, Figure 1 is a side view, partially in section. Fig. 2 is a plan partially in section below the line *y y;* and Fig. 3 is an elevation of the pressing-segments, the rods being in section at the line *x x*, Fig. 1. In Figs. 1 and 2 some of the rods are shown as broken off, in order to shorten up the distance occupied.

The driving-shaft *a* is supported by frames *b b*, of any suitable character, between which is the pulley or wheel *c*, by which the shaft *a* is revolved. The cranks *d* are at the ends of the shaft *a*, and receive the connecting-rods *e e*, attached to the cross-head *f*, by which said cross-head is moved back and forth in guides or ways *g* of the required length, that are supported by suitable frames or standards, *k*. The cross-head *f* becomes the pivot or joint between the connecting-rods *e* and the links *l l* and *m m* of the sectors *o* and *p*. These sectors are pivoted by the shafts *u v* to the head-blocks *r r'*, respectively, and the rods or columns *s s'* connect the head-blocks and form a strong open frame. It is usually preferable to make the portions *s s'* of the frame in the form of tie-rods or columns passing at their ends through the head and foot blocks, and provided with nuts, so as to adjust accurately the distance between such head and foot blocks. The sectors *o* and *p* are swung back and forth by the cranks and connecting-rods, and the parts are placed so that when the cranks pass the horizontal position nearest the sectors the sectors stand in the position shown in Fig. 1, with their surfaces sufficiently far apart to allow for introducing a skin, hide, or other piece of sheet material between them and moving the same freely for adjusting its position; but as the cranks revolve the sectors are swung and grip the material and gradually press and emboss the same by the curved engraved plate or block *w*, that is fastened to the upper sector, *o*.

It is to be understood that the embossing-surface may be in the form of leaves or ornaments, or roughened or mottled to give the required grain or appearance to the surface of the leather or other material.

The embossing-plate *w* is removably attached to the segmental surface of the sector *o* by screws or otherwise, so that it may be changed from time to time as required.

There are by preference openings at *z*, through the segmental beds of the sectors *o p*, so that heating irons or slugs can be thrust into the same, or in which gas-flames or steam can be introduced to give to the embossing plate or block and to the sectors the required heat to insure a perfect embossing operation.

It will now be apparent that the embossing pressure can be very powerful by the expenditure of only a small amount of power, because the embossing-plate operates with a rolling movement. The material operated upon is relieved from pressure each movement, and can be slipped along on the tables or supports *w'*, so as to bring the surface to the proper place for receiving the next embossing operation.

I claim as my invention—

1. The combination, with the cross-head, cranks, and links, of the connecting-rods *l m*, the sectors *o p*, embossing plate or block, and the head-blocks *r* and *r'* and their connections, the parts being arranged so that the sectors

o p separate to allow of the movement of the material that is being embossed, substantially as set forth.

2. The head-blocks *r* and *r'* and adjusting screw-rods and nuts, in combination with the sectors *o p*, the connecting-bearings and pivots, the embossing plate or surface, and the connecting-rods and means for giving to such rods and to the sectors the movements specified.

Signed by me this 31st day of July, A. D. 1882.

GEORGE W. GARNAR.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.