(No Model.)

E. B. COOK.

GALVANIZING MACHINE.

No. 590,965. Patented Oct. 5, 1897.

Fig. 1

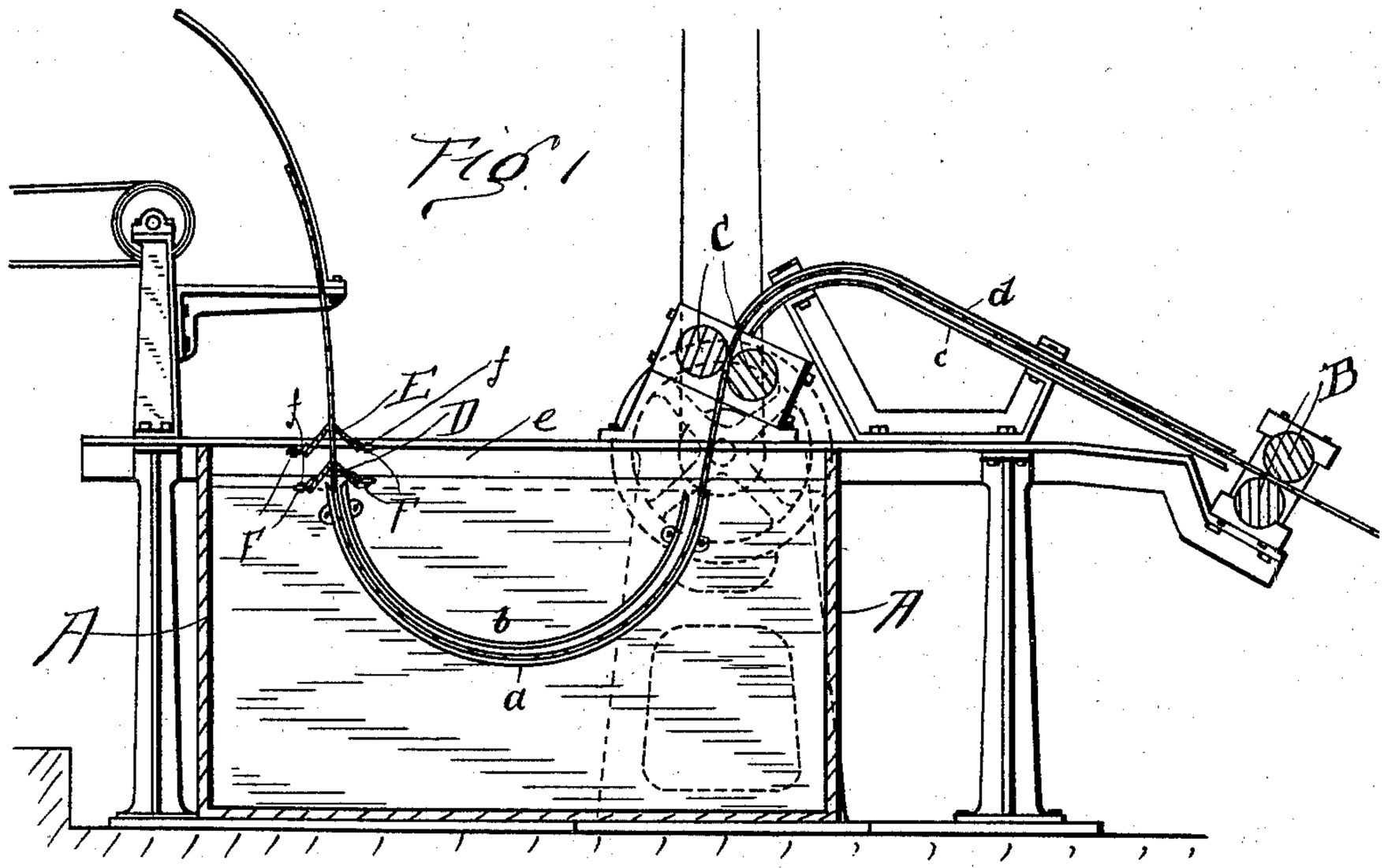


Fig. 2

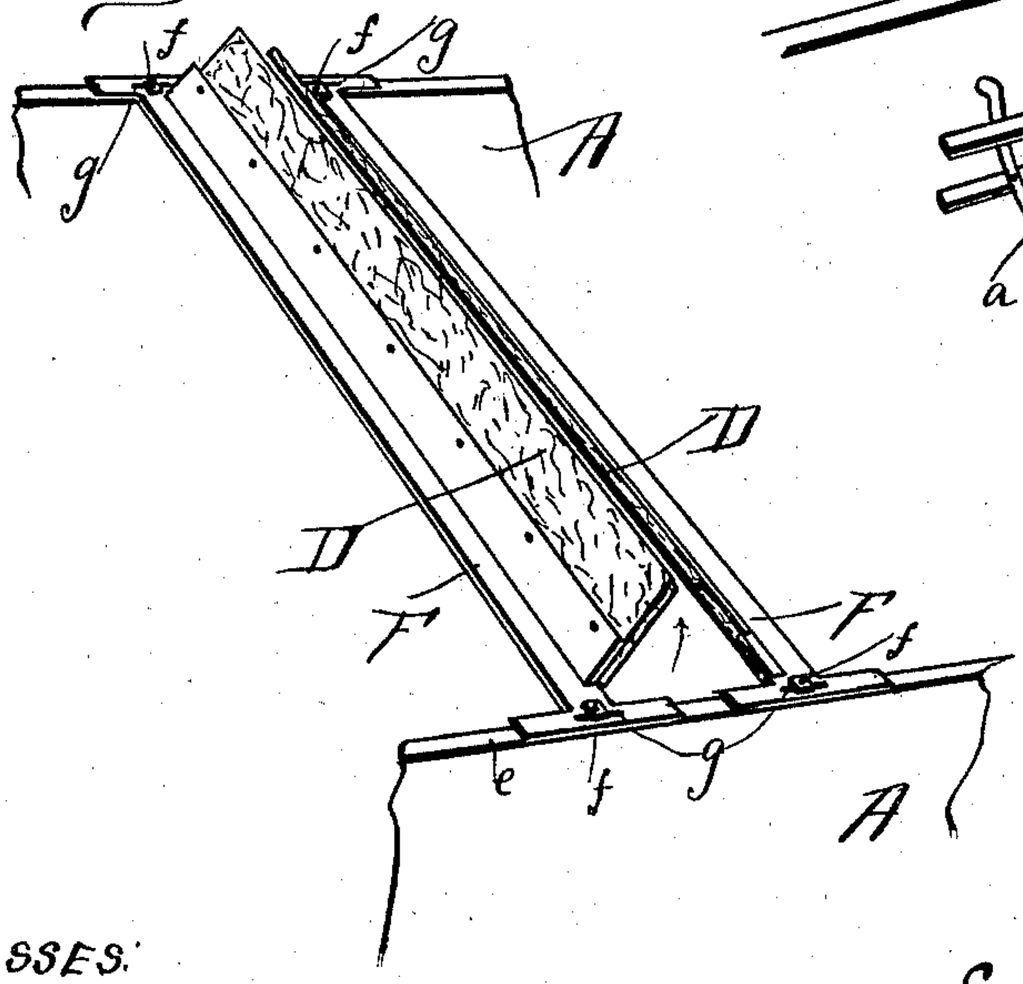
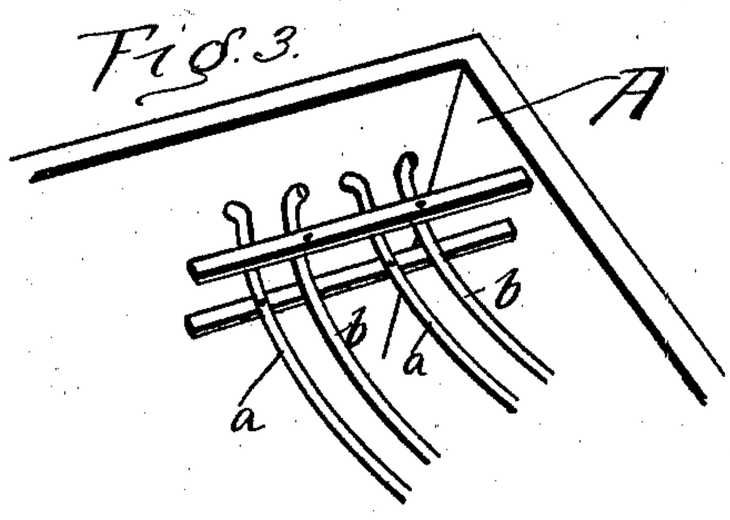


Fig. 3.



Witnesses:
C. J. Cross.
J. A. Jeffers

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UNITED STATES PATENT OFFICE.

EDWIN B. COOK, OF CANTON, OHIO.

GALVANIZING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 590,965, dated October 5, 1897.

Application filed June 21, 1897. Serial No. 641,548. (No model.)

To all whom it may concern:

Be it known that I, EDWIN B. COOK, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Galvanizing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a vertical section of the pot, showing the guides and scrapers properly arranged. Fig. 2 is a detached view of one set or pair of scrapers. Fig. 3 is a view showing a portion of the pot and illustrating the position of the guide-bars.

The present invention has relation to galvanizing-machines; and it consists in the novel arrangements hereinafter described, and particularly pointed out in the claim.

The object of the present invention is to place galvanizing material upon sheets of metal without the use of sand or like material and at the same time to coat the sheets of metal upon both sides and to give to said sheets a thin even coat of the galvanizing material.

In the accompanying drawings, A represents the pot, which may be of any desired kind or style, inasmuch as the pot within itself forms no particular part of the present invention, except that a pot must be employed to contain the melted material from which the sheets are to be galvanized. It will also be understood that a fire is to be placed around the pot to properly heat and melt the material used for galvanizing the sheets as they are passed through the guides contained in the pot. The guide-bars *a* and *b* are located substantially as illustrated in Figs. 1 and 3, and as shown they are so arranged that they will guide the metal sheets downward and then upward, so that the sheets will be entirely submerged in the molten metal.

For the purpose of feeding the sheets from the drying-rollers B to the feed-rollers C the guide-bars *c* and *d* are provided and are held in proper position by suitable cross-bars. For the purpose of removing the surplus metal from the sheets after they have passed through the molten metal and at the same time evenly spreading the galvanizing material the asbestos bars D and E are provided, said bars being located substantially as shown in Fig. 1, and as shown they are located at an angle to the path of the metal sheets, said bars being inclined upward, as shown, and are so located to allow the sheets to more easily pass between the bars. The asbestos bars D and E are each attached to the adjustable bars F, which adjustable bars may be connected to the top bars *e* by means of the clamping-bolts *f*. For the purpose of providing a means for setting the bars F to or from each other they are provided with the slots *g*. In use the upper edges of the bars D and E are spaced so that they will remove all the surplus galvanizing material from the sheets and at the same time will hold the sheets in a steady position, by which arrangement no lateral movement of the sheets is permitted and at the same time an even and uniform thickness of the galvanizing material is left upon the finished sheets. This result cannot be carried out by the use of sand, inasmuch as the lateral movement of the sheets will displace the sand, causing the galvanizing material to be thicker at some places than at others, or, in other words, leaving the galvanizing material wavy. By providing the asbestos bars all of the surplus material is removed, inasmuch as the material will not adhere to the asbestos bars, but will drop from the bars into the molten metal after it has been scraped or removed from the plates.

I do not desire to be confined to asbestos, inasmuch as mineral wool may be employed in place of asbestos.

In the drawings I have shown two sets or pairs of scraping-bars, and the bars may be so located and arranged that the lower set will remove the greater portion of the surplus material, and the upper set removing the balance of all surplus material, this being accomplished by decreasing the space between the upper set of bars.

It will be understood that I am enabled to increase or decrease the thickness of the coating to be put upon the sheets of metal. In use it is quite important that the coating be thin and even, so that it will not flake when the sheets are bent or folded, and by my

arrangement I am enabled to regulate the thickness of the coat.

I do not desire to be confined to two sets of scraper-bars, inasmuch as one set may be so adjusted that the galvanizing material can be removed and distributed sufficiently without the aid of the second set of bars.

It will be understood that the scraper-bars should be located above the molten metal, so that they will act upon the metal sheets after they have passed through the molten metal.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a galvanizing-pot, guide-bars located within the pot and within the molten metal, and scraper-bars D and E formed of asbestos, the bars E located above the bars D and adjustable horizontally to or from each other, the sets of scraper-bars being spaced different distances apart, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWIN B. COOK.

Witnesses:
J. A. JEFFERS,
F. W. BOND.