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W. H. WANGELIN.
SAND FEEDING DEVICE FOR MOLDING MACHINES.
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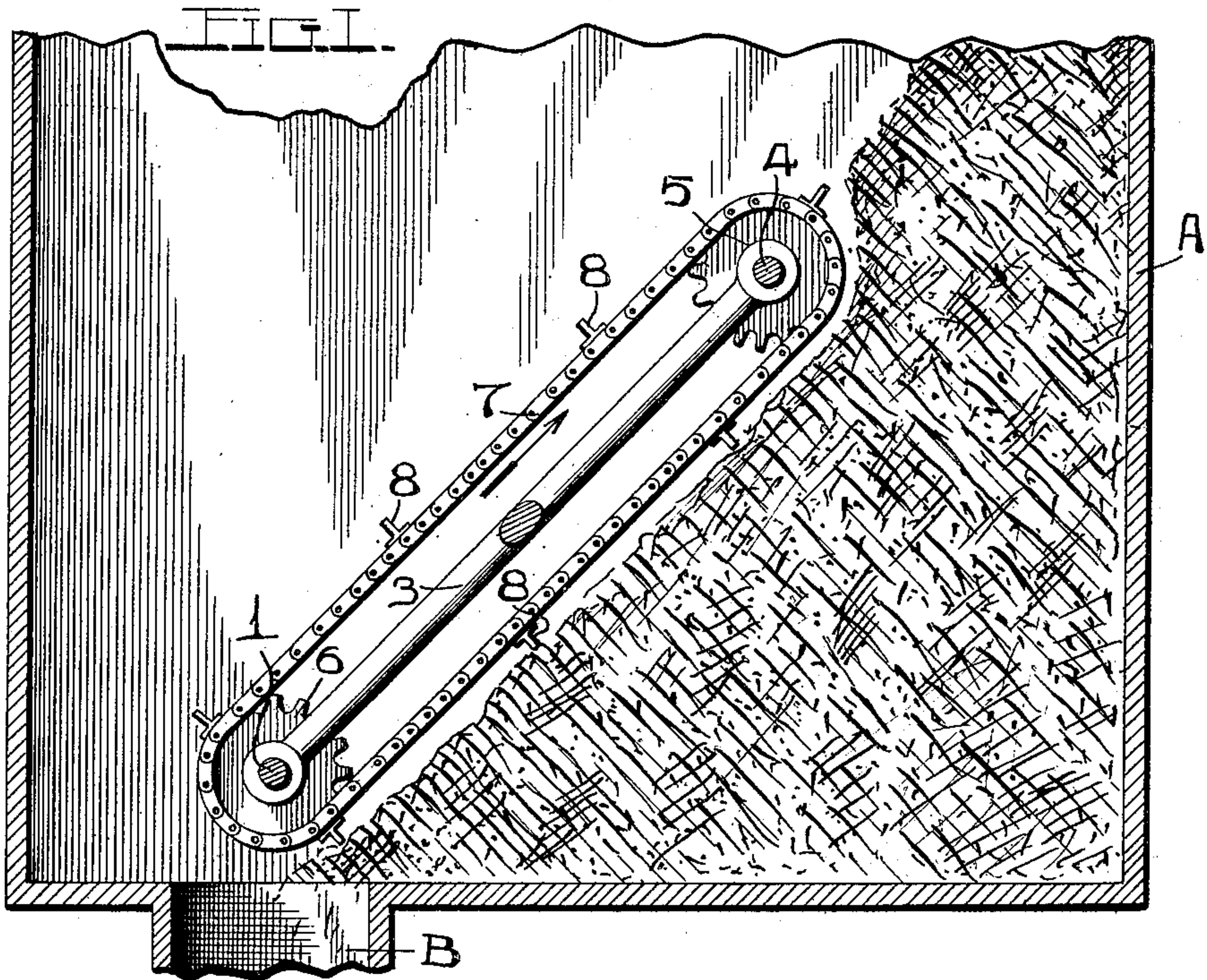
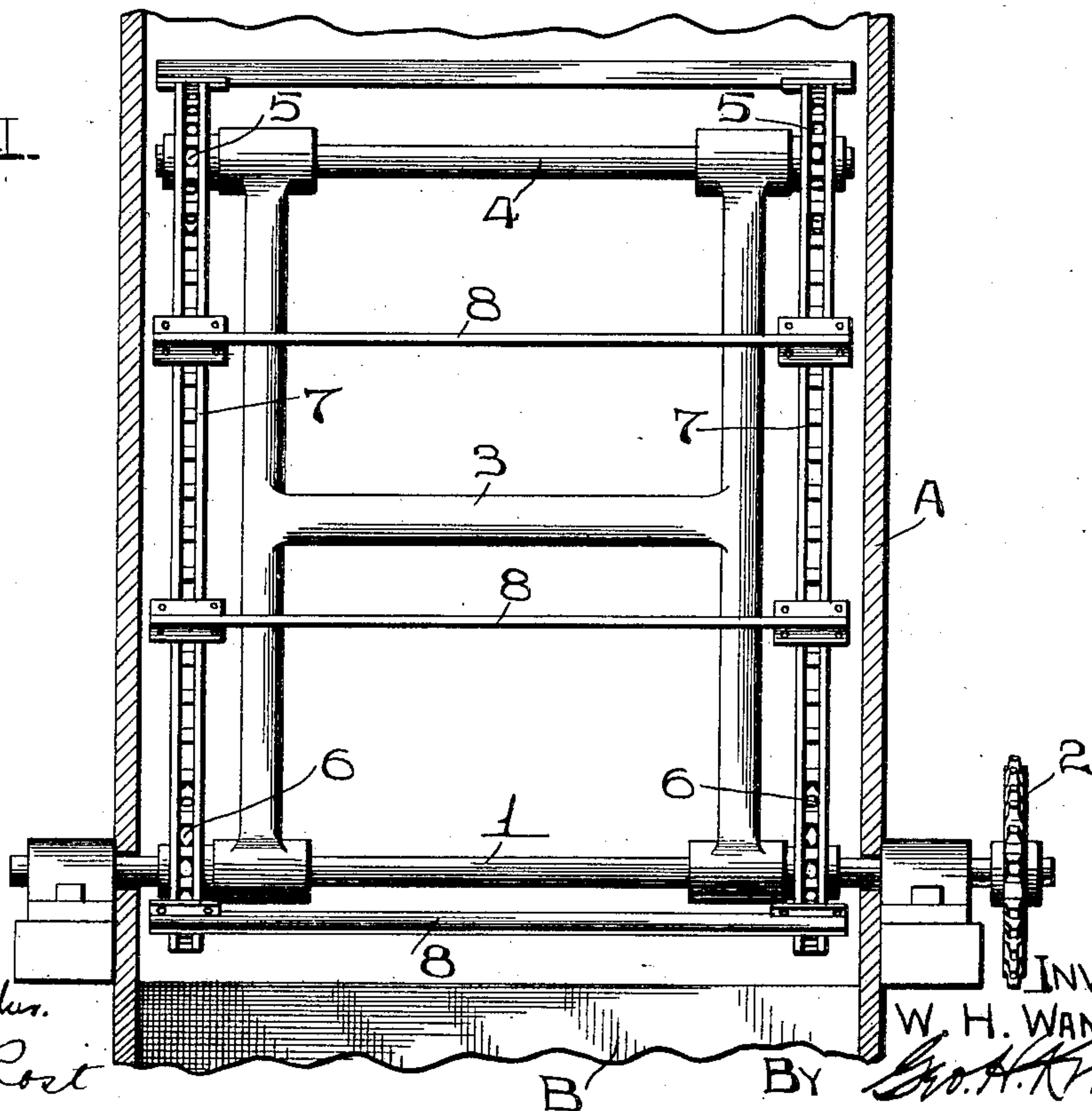


Fig. II



ATTEST.

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SAND-FEEDING DEVICE FOR MOLDING-MACHINES.

No. 897,942.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER H. WANGELIN, a citizen of the United States of America, and residing at the city of Belleville, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Sand-Feeding Devices for Molding-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a device for feeding either dry or wet sand to molding machines.

Heretofore it has been possible to feed dry sand to molding machines without any difficulty inasmuch as sand, in a dry condition will move downwardly and out of a receptacle in which it is placed above the molding machine, without any assistance, but in so far as I am aware, no device has been employed in which sand in a wet condition may be caused to move from a receptacle placed above a molding machine so that the flow from said receptacle will not cease during the operation of the machine and the receptacle be entirely empty.

By the employment of the feeder to which my invention relates, the sand may be delivered from the receptacle as slowly or rapidly as may be desired and until the receptacle is emptied.

Figure I is a vertical section taken through a sand receiver and my feeding means located therein. Fig. II is in part a vertical section taken through the receiver, and in part an elevation of my feeder.

In the accompanying drawings, A designates a receiver in which the sand to be fed is placed and which is provided at its bottom with a spout B.

1 designates an inner driving shaft that extends horizontally through the receiver A, over, and adjacent to, the spout B, and which may be rotated by any suitable means such as a drive chain (not shown) applied to a sprocket wheel 2 (see Fig. II).

3 designates a frame of H-shape loosely fitted at its inner end to the driving shaft 1 within the receiver A so that it is susceptible of freedom of movement relative to said driving shaft and may move in a downward direction in the receiver when freed of restraint, this being due to the outer end of the frame being entirely free of connection with the receiver.

4 is an outer shaft mounted in the outer

ends of the frame 3 and on which are driven sprocket wheels 5.

6 are driving sprocket wheels rigidly mounted upon the driving shaft 1 and which are complementary to the driven sprocket wheels 5.

7 are endless chains mounted upon the driven sprocket wheels 5 and driving sprocket wheels 6. These chains are adapted to be driven by the driving sprocket wheels 6 on which they operate and by which they are guided at the inner end of the frame 3, while they are guided at the outer end of the frame by the driven sprocket wheels 5. The chains have fixed to them conveying bars 8 of any desirable number which extend transversely of the frame 3 and are adapted to travel with the chains and scrape the sand downwardly directly toward the spout.

In the practical use of my sand feeding means, sand is placed in the receiver A to be discharged therefrom through the spout B as desired, and the feeder is placed in operation by the communication of power to the driving shaft 1, whereby the chains 7 with their conveying bars 8 are moved while supported by the frame 3. The chains 4 and their conveying bars rest continuously against the sand in the receiver, as illustrated in Fig. I and the chains being driven in the direction indicated by the arrow, Fig. I, the sand is scraped and conveyed in a downward direction by the conveying bars 8 to the spout of the receiver to flow therethrough under the driving shaft. As the quantity of sand becomes lessened in the receiver, the feeder falls toward the bottom of the receiver to maintain the conveying bars in contact with the sand and this contact is sustained until the entire amount of sand has been discharged from the receiver.

I claim:

1. In a sand feeder, the combination of a receiver, having a spout at the bottom thereof, of a driving shaft mounted in said receiver, over, and adjacent to, the spout, and sand feeding means loosely supported at its inner end by the said driving shaft and free at its outer end except by the body of sand placed in said receiver and carrying sand feeding means adapted to scrape the body of sand in the direction of the spout, substantially as set forth.

2. In a sand feeder, the combination of a receiver, having a spout at the bottom thereof, of a driving shaft mounted in said receiver,

over, and adjacent to, the spout, a frame loosely fitted at its inner end to said driving shaft and free at its outer end, and carrying sand feeding means adapted to scrape the
5 body of sand in the direction of the spout, driven by said driving shaft and supported by said frame, substantially as set forth.

3. In a sand feeder, the combination of a receiver, having a spout at the bottom there-
10 of, an inner driving shaft mounted in said receiver, over, and adjacent to, the spout, a frame loosely fitted at its inner end to said driving shaft and free at its outer end, an
15 outer shaft mounted in the outer end of said frame, and endless chains provided with conveying bars fixed to said shafts and adapted to scrape the body of sand in the direction of the spout, substantially as set forth.

4. In a sand feeder, the combination of a receiver, having a spout at the bottom there- 20 of, an inner driving shaft mounted in said receiver, over, and adjacent to, the spout, a frame loosely fitted at its inner end to said driving shaft, and free at its outer end, a
25 driven shaft mounted in the outer end of said frame, driving sprocket wheels fixed to said driving shaft, driven sprocket wheels on the outer shaft, endless chains mounted upon said sprocket wheels, and conveying bars
30 fixed to said chains and adapted to scrape the body of the sand in the direction of the spout, substantially as set forth.

WALTER H. WANGELIN.

In the presence of—

LILY POST,
L. C. TAAKE