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F. J. STEPHENS

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BAG FILLING MACHINE

Filed Jan. 21, 1931

Fig. 1

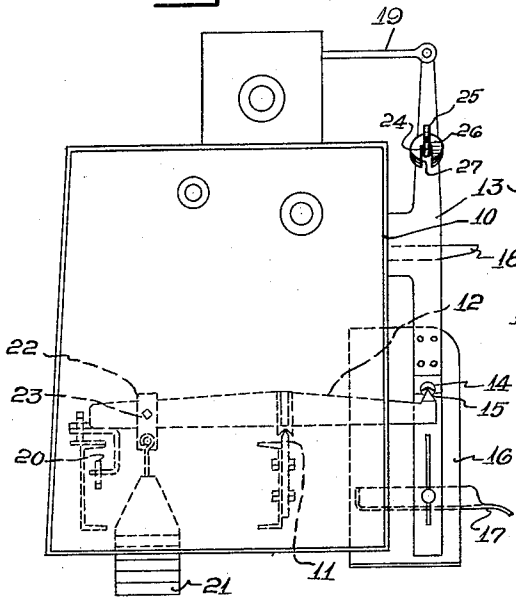


Fig. 2

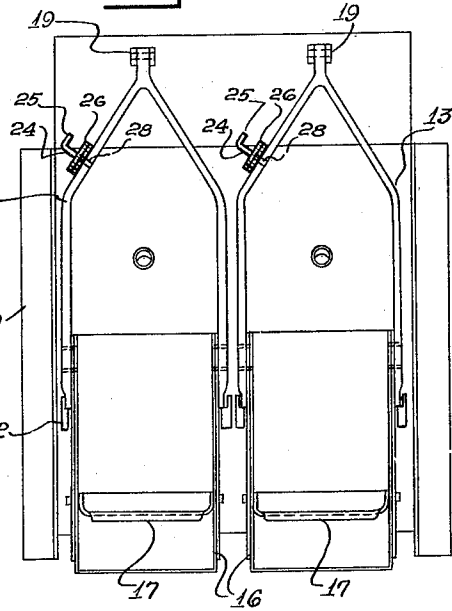


Fig. 4

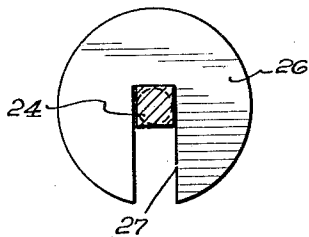
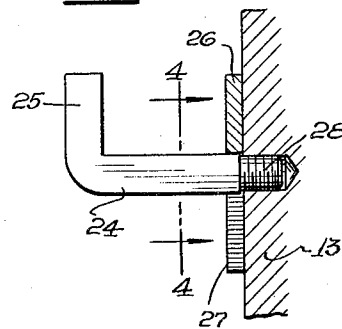


Fig. 3



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## BAG FILLING MACHINE

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This invention relates to bag filling machines, and has reference more particularly to bag filling machines in which accurate weight of powdered material such as lime, calcined gypsum, Portland cement, etc., are run into paper bags preparatory to shipment.

In the filling of paper bags, it is customary to slip a paper bag having a valve opening over a filling nozzle with the bottom of the bag resting upon a support, which in turn is carried on the end of a scale beam. Suitable weights are adjustably supported on the opposite end of the scale beam for counterbalancing the weight of the filling bag on the bag support and when the weight of the powdered material in the bag overbalances the weight on the scale beam, the flow of the powdered material into the bag is automatically stopped. It has been found that, owing to the fact that the weights on the scale beam are not conveniently located for easy adjustment, the workmen are negligent in so adjusting the weights with the result that an incorrect weight of powdered material is run into the bag.

An object of this invention, therefore, is to provide a bag filling machine in which weights of low denomination are placed on the bag support at the front of the machine in convenient reach of operator, for making a fine adjustment of the quantity of material put into the bag; also to improve bag filling machines in other respects hereinafter specified and claimed.

Reference is to be had to the accompanying drawing forming a part of this specification, in which

Fig. 1 is a side elevation of a bag filling machine,

Fig. 2 is a front elevation of a bag filling machine,

Fig. 3 is a sectional elevation showing a hanger for supporting weights of low denomination, and

Fig. 4 is a sectional elevation through the weight hanger taken on line 44 of Fig. 3.

A standard type of bag filling machine is illustrated, which is well known in the art, and comprises vertical standards 10 which

carry a scale fulcrum 11, upon which is pivotally supported a scale beam 12. A bag frame 13 is provided with a pair of pivot blocks 14 which are pivotally supported upon a knife edge 15 which is mounted on the forward end of the scale beam 12. A bag support 16 is secured to the frame 13 and carries an adjustable platform 17 for supporting the bottom of the bag to be filled. A filling spout or nozzle 18 is also carried by the frame 13, and the valved end of the paper bag is slipped over said spout 18, the bottom of the bag resting upon the platform 17. The upper end of the bag frame 13 is connected by a pivoted link 19 to the main framework of the filling machine. Suitable ejecting mechanism is provided inside of the bag filling machine to eject the powdered material out of the spout 18 and into the bags to be filled. It is customary to provide suitable limit stops 20 on the rear end of the scale beam 12 so as to limit the tilting movement of said scale beam. A plurality of heavy weights 21 are also suspended from the rear end of the scale beam 12 by means of any suitable brackets 22, said brackets being adjustable along the scale beam 12 and being secured in position by an adjusting screw 23. Owing to the inconvenience of changing the position of the weight brackets 22, or changing the weights 21 to obtain the proper weight of powdered material in the paper bag, the workmen frequently neglect to secure the desired weight in the bag with the result that the bags are shipped out without containing the proper weight of the material.

The salient feature of this invention, therefore, consists in providing an L shaped bracket 24, or other suitable supporting means, on the portion of the bag filling machine supporting the bag, as the bag frame 13. This bracket 24 is preferably square in cross section and has an upwardly extending arm 25 for retaining in place a plurality of weights 26 of low denomination. These weights may be equivalent to a weight of  $\frac{1}{4}$  or  $\frac{1}{2}$  pound of powdered material in the bag. The weights 26 are preferably provided with an inwardly extending slot 27 for receiving the supporting bracket 24. The in-

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ward end of the bracket 24 is preferably provided with a threaded section 28 which is screwed into a tapped hole formed in the frame 13. It will thus be seen that since the  
5 bracket 24 is mounted at the front of the machine on the bag frame 13 in convenient reach of the workmen, the workmen will diligently see that the proper weights are hung on the bracket 24 to obtain exactly the  
10 weight desired in the bag.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not wish to limit myself precisely to these details, since  
15 manifestly the same may be considerably varied without departing from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I  
20 claim as new and desire to secure by Letters Patent:—

1. In a bag filling machine, a pivotally mounted scale beam, a bag supporting frame mounted upon one end of said scale beam,  
25 means associated with said frame for injecting powdered materials into said bag, weights adjustably mounted upon the opposite end of said scale beam, and weights of low denomination carried upon said bag supporting frame.
- 30 2. In a device of the class described, the combination with a scale beam and a bag supporting frame mounted on one end of said scale beam, of weights of low denomination  
35 detachably mounted upon said bag frame.

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