Schrick & Hildenbrand.

Filling Horse-Collars.

No. 72423

Patented Dec. 17, 1867.

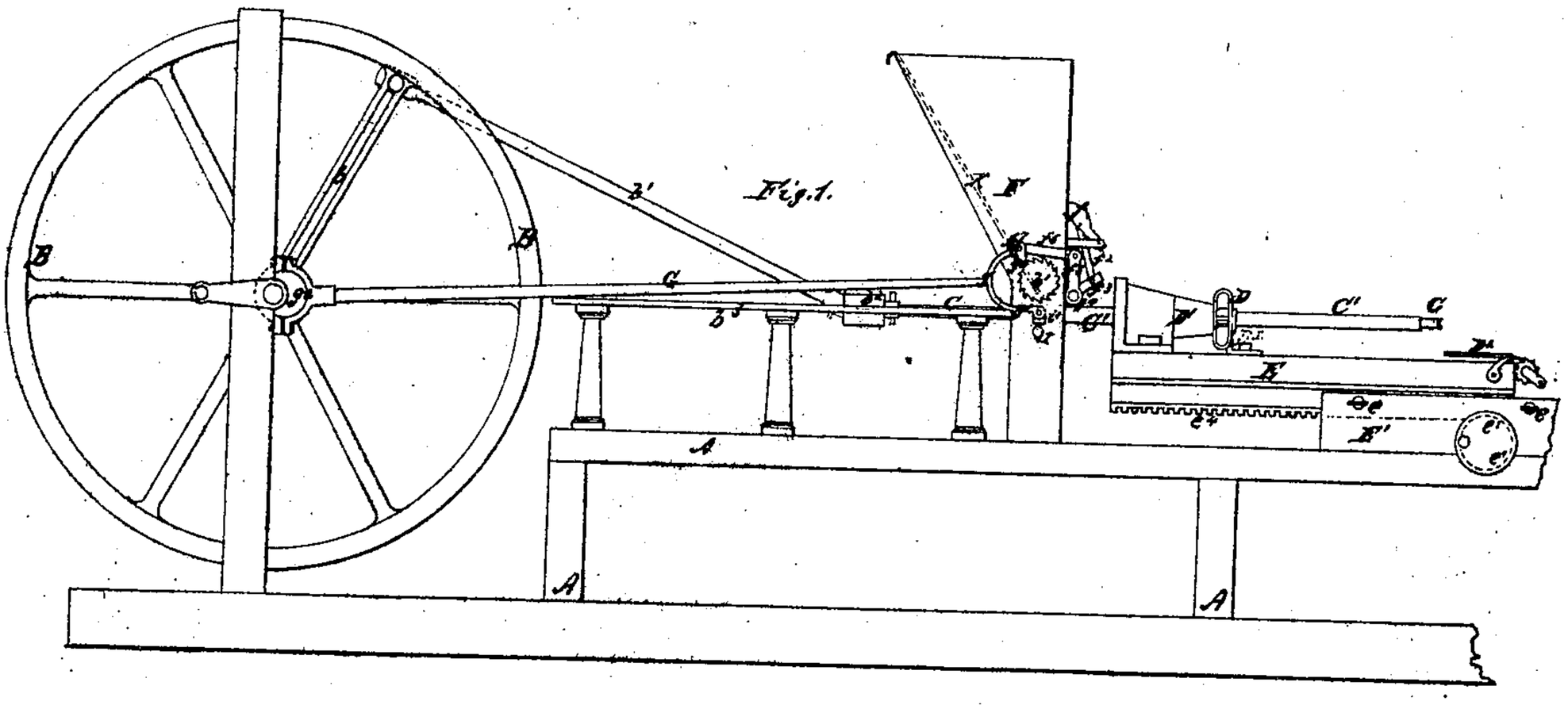

Fig. 1.

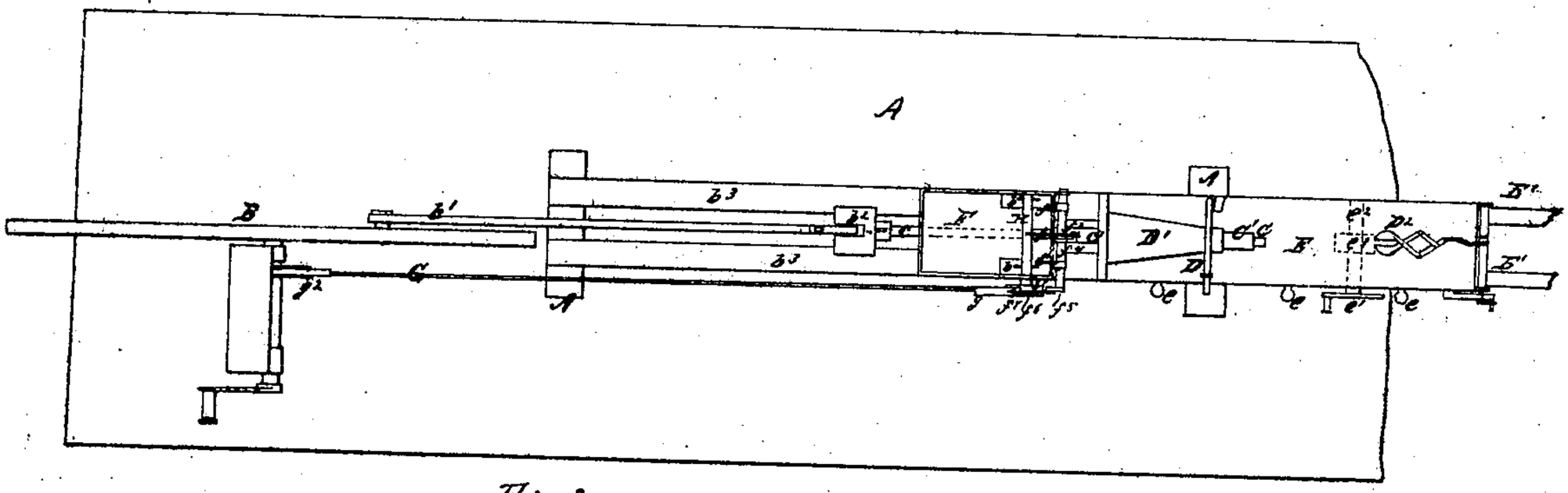

Fig. 2.

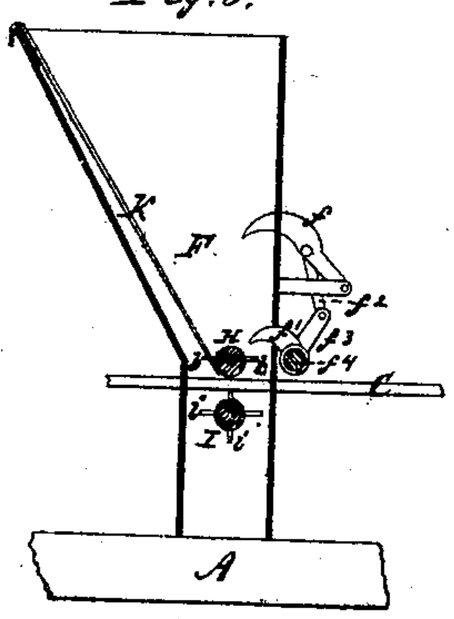

Fig. 3.

Witnesses.

Thomas J Burridge

Chas. F. C. Goyle.

Inventors.

A. Schrick

H. Hildenbrand

By their Atty

J. McLandsborough Co

United States Patent Office.

AUGUST SCHRICK AND HENRY HILDENBRAND, OF ST. LOUIS, MISSOURI, ASSIGNORS TO THEMSELVES, F. C. KRAYER, AND C. R. SCHRICK, OF THE SAME PLACE.

Letters Patent No. 72,423, *dated December* 17, 1867.

IMPROVED MACHINE FOR FILLING HORSE-COLLARS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, A. SCHRICK and H. HILDENBRAND, of the city and county of St. Louis, State of Missouri, have invented certain new and useful Improvements in Machines for Filling Horse-Collars, and for similar purposes; and we do hereby declare the following to be a full and true account thereof, reference being had to the accompanying drawings, and to the letters of reference thereon.

The object of our said invention is to fill or stuff horse-collars or similar bolstered appliances rapidly and thoroughly, and the general nature of our said invention is in certain improved devices, and methods of applying the same, as will more fully now appear. Of said drawings—

Figure 1 is a general front elevation,

Figure 2 is a general plan, and

Figure 3, a partial longitudinal section.

By reference to our former patent, numbered 59,726, and issued to us on the 13th of November, A. D. 1866, it will be observed that the improvements here presented refer especially to the feed of straw or other stuffing-material into the feed-funnel, and we will, therefore, in the following, specially describe only such parts of the machine, as shown by aforesaid drawings, as will differ from such parts shown and fully described in our patent aforesaid.

We support the machine parts upon a proper frame, A, at one end whereof power may be taken from a fly-wheel, B. The arm b, to which the connecting-rod b^1 attaches, is slotted in such wise that the stroke may be varied. The cross-head b^2 is moved by b^1, being well guided in the guide-bars b^3. From the cross-head the reciprocating motion is transmitted directly to the plunger or filler C. This, in its reciprocating motion, plays in the tube C′. The straight unfilled collar is held by proper tongs D to a support, D^1, these being secured to a sliding bed, E. The support D^1 serves also as a guide for the feed-tube C′. On the other end of the sliding bed E are the gripers D^2, to hold the rear end of the collar whilst being stuffed. The bed E moves on the lower bed-plate E′ to regulate the sliding motion. The set-screws e may be tightened up, so as, by pressing against E, (they being held in E′,) the said motion is retarded. A hand-wheel, e^1, operating, by the shaft e^2, the cog-wheel e^3 by gearing into the rack e^4, on E, may also be used to move E. When the collar is stretched between D, D^1, and D^2, and the plunger C is filling the same, this process will force the collar, and the bed E, to which it is indirectly secured, back, in accordance with the progress of the filling-process. The hand-wheel e^1 is afterwards used to bring E into proper position for subsequent filling, and so forth, whilst the set-screws e are used to regulate the backward motion of E, as stated. All of this will also appear by reference to our said Patent, No. 59,726. The feed-tube C′ starts from a stationary hopper, F, into which the straw is thrown, and as the plunger C plays through the lower part of F, at each stroke it takes, (by the serrated edges and end of C,) the proper quantity of material from F, and carries the same through C′ into the collar on E. But in order that the plunger or stuffer C should in each stroke grasp the proper quantity of material, the straw or other proper material must be guided or forced toward the range of C.

This feed to C we accomplish in the following improved manner: The straw is thrown into the hopper F, near its upper end. To pass it down toward the lower and narrower part of F, we use, firstly, the scrapers $f f^1$ having a vibratory motion. Of these, the scraper f may be secured by a pivot on the wall of F, and receive motion by a connecting-bar, f^2, which again receives motion from the crank f^3 on the rock-shaft f^4. The scrapers f^1 may be directly secured to f^4, then f and f^1 will vibrate in opposite directions, and an efficient feed of material be reached by the combined action thereof. The rock-shaft f^4 receives motion by the crank f^5, rod f^6, and rod f^7, this being secured to a prong, g, of the eccentric-bar G, which is driven by the main axle of the fly-wheel B. The bar G may have any proper attachment to said main axle to give it a small reciprocating motion corresponding to the plunger C. In this case we have made the attachment by the usual eccentric, at g^2. After the straw has been guided down by the scrapers f and f^1, the rotating shaft H, with its prongs h, throws it before the plunger C to be duly pressed into C′, as above described. The said shaft H passes across the hopper F transversely. Outside of F it has the toothed wheel h' by which it is turned intermittently, the wheel being acted upon by the prong g of the eccentric-bar G.

In case the material used is fine-cut straw, shavings, and such like, the scraper-hooks ff^1 may not be needed. One of the connecting-pins between f^6 and f^7 may then be removed, and the scrapers thus thrown out of play on the lower side of H. However, a second rocking-shaft, I, may then be used to guide the material toward the plunger C. The shaft I, lying similarly to H, has similar prongs, *i*, and passes outside of F, having a crank, *i'*, which, by a proper pin, may be connected with a lower prong, g^1, of the eccentric-bar G. In this case a partition-piece, K, will usually be inserted in the hopper F, as indicated in red lines, to properly guide the fine material to the forward end of the hopper F.

We do in nowise limit our said invention to the special forms and connections of the devices here recited, but insist that any arrangement equivalent in form or action is included in the nature of this our claim.

Having thus fully described our said invention, what we claim, and desire to fully secure by Letters Patent, is—

1. The scraper or scrapers ff^1, and their combination with the rock-shaft f^4, substantially as and for the purposes set forth.

2. The combination of the rotating shaft H and its prongs *h* with the rock-shaft I and its prongs *i*, substantially as set forth.

3. The eccentric-bar G, the shaft f^4, and the shaft H, when combined and acting substantially as and for the purposes set forth.

4. The combination of the eccentric-bar G with the shaft, substantially as and for the purposes set forth.

5. The arrangement of the partition-piece K in the hopper F, substantially as and for the purposes set forth.

AUGUST SCHRICK,
HENRY HILDENBRAND.

Witnesses:
GEO. P. HERTHEL, Jr.,
HENRY GLAD.