

the convexed portion of the spring. Therefore, since the frame 2 of the panel is held seated under the tension of the spring 25, any tendency thereof to rattle is entirely eliminated.

For the purpose of concealing the slot 14 when the panel 1 is removed to provide an open body, there is preferably employed a closure plug 27 which comprises the spring retaining arms 28 and a bead-like head portion 29 similar in shape to the bead or molding 9 on the top edge of the door. Fig. 7 of the drawings shows this plug in perspective above the slot 14, and it will, of course, be understood that when the plug is inserted in the slot the latter is entirely closed, and the head portion 29 thereof coöperates with the bead or molding 9 to form a substantially unbroken surface.

From the foregoing, it will be apparent that one of the distinctive features of the present invention is the provision of a yieldable connection between the sash panel and the door, which can be easily and quickly established, and at the same time eliminate all possibility of rattle when the door is closed. By way of forming this yieldable connection it may be noted that when the sash is put in place on the top of the door, each tenon element 15 carried thereby enters one of the slots 14, which is slightly at one side of the center of the escutcheon plate 13, and moves downwardly in a substantially perpendicular plane along the vertical inner face of the spring 25 as indicated in Fig. 4. The sash panel 1 may, therefore, assume a vertical position during the greater part of its movement toward the top of the door, but upon reaching the rounded side of the convexed holding hook 24, the end of the tenon becomes deflected against the face of the guard flange 23, as also indicated by dotted lines in Fig. 4. This forcing of the free end of the tongue 15 by the spring 25 into engagement with the wall 23, which as previously stated is located at one side of the outer edge 14^a of the slot, thus causes the entire sash to tilt inwardly on the bead 9 and edge 14^a of the slot 14 toward the door jamb, assuming of course that the door is open when the sash is applied thereto. Accordingly, it will be apparent that the said outer edges 14^a of the slots constitute a fixed fulcrum for the tenons 15 to tilt or cant to the sash, while the inner edges 14^b of the slots lie in substantially the same perpendicular plane as the inner vertical face 25^a of the spring.

Owing to the relatively off-center position of the slot 14 with relation to the socket S, and the position of the rounded nose of the convexed holding portion 24 of the spring 25, the entire sash is given an inward tilt away from the vertical as clearly shown in Fig. 3 of the drawings. When the door is

closed the upper edge of the sash or frame 1 will abut with the shoulder provided by the rabbeted seat R in the top T of the automobile body, and when the upper edge of the sash panel strikes this abutment, it will be forced outwardly against spring tension to the position shown in Fig. 2 of the drawings. All of the greatest swinging movement or play of the sash takes place at the upper free end thereof, while the lower edge having the groove 10 therein rocks on the beading or molding 9. Furthermore, owing to the relatively large dimensions of the clearance slot 12 beneath the entrance slot 14, the rocking movement of the sash on the beading 9 is not hindered, and the spring 25 in each element 11 is relatively free to exert its full influence on the free end of the tenons 15. When the sash is seated on the door and the free end of the tongue 15 is forced into frictional contact with the inner face of the guard flange 23, the holding of the sash in position is assisted by the engagement of the rounded surface of the hooked portion 24 of the spring 25 engaging with the notch 19 of the tongue, thus preventing accidental displacement.

Without further description, it is thought that the many features and advantages of the present invention will be readily apparent, and it will be understood that various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit of the invention or scope of the appended claims.

I claim:

1. A door construction for convertible automobile bodies comprising in combination, a door case and a door permanently hinged thereto, a removable and replaceable sash panel adapted to have a rockable bearing engagement with the upper edge of the door and carrying tenon elements therewith, a socket device permanently carried by the door for each tenon and having a locking and deflecting spring engaging the lower end of said tenon elements only when the sash is on the door to place the said tenons under tension and tilt the sash panel toward the door case.

2. A door construction for convertible automobile bodies comprising in combination, a door case, a swinging door permanently hinged to said case and including a frame having slots in the top member thereof, yielding tenon engaging and deflecting means carried by the door frame below said slots, and a removable and replaceable panel having tenon means at each corner for entering said slots and detachably engaging with said tenon engaging and deflecting means to tilt the door inwardly against one edge of said slots.

3. A door construction for convertible automobile bodies comprising in combina-

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CATALOGUE WRAPPING MACHINE.

APPLICATION FILED OCT. 14, 1916.

1,269,308.

Patented June 11, 1918.

12 SHEETS—SHEET 2.

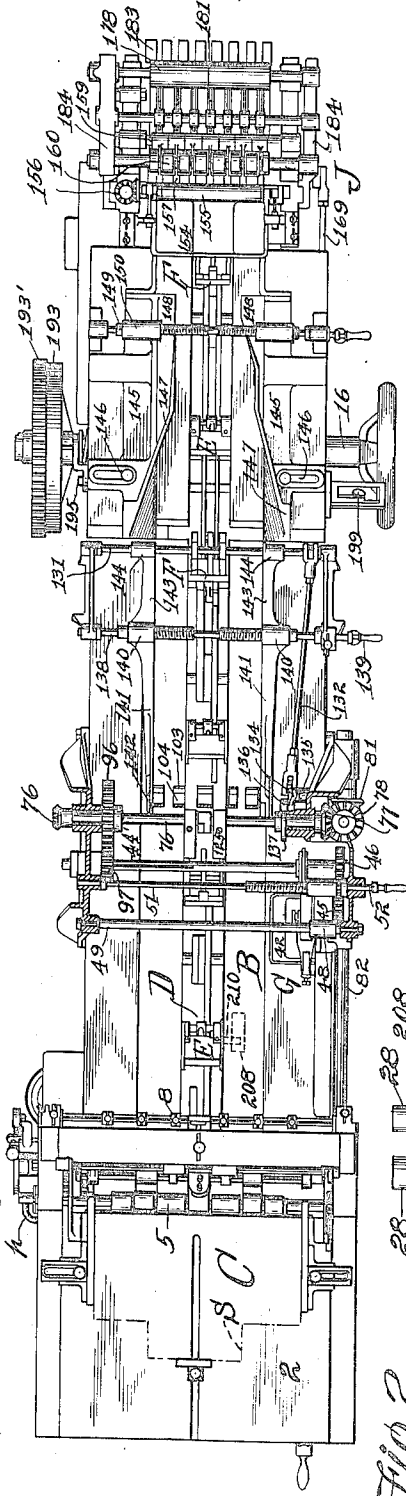


Fig. 1.

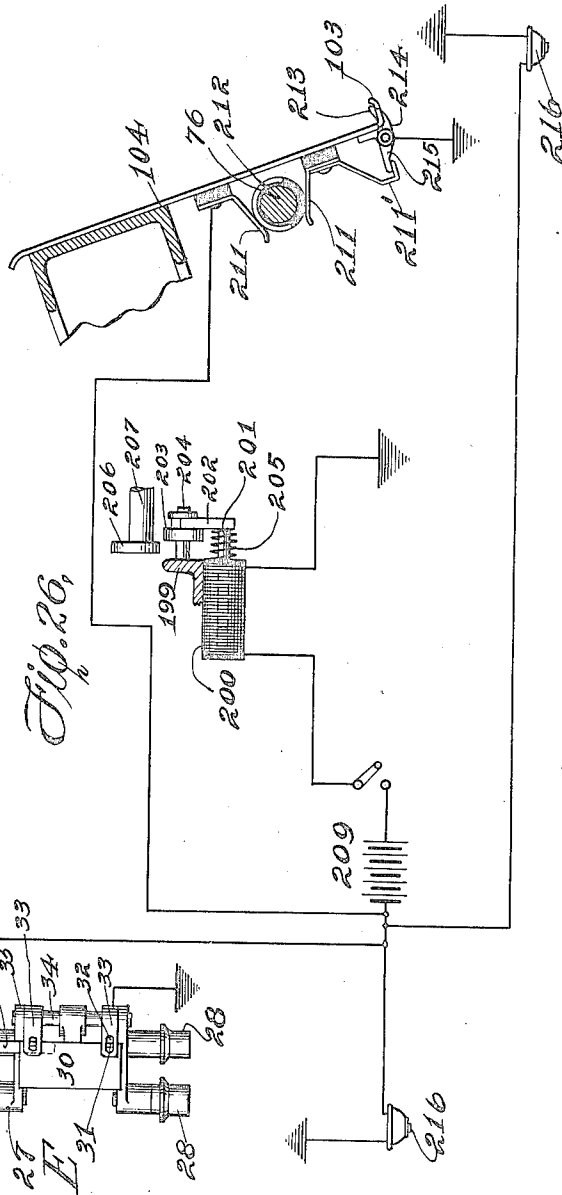
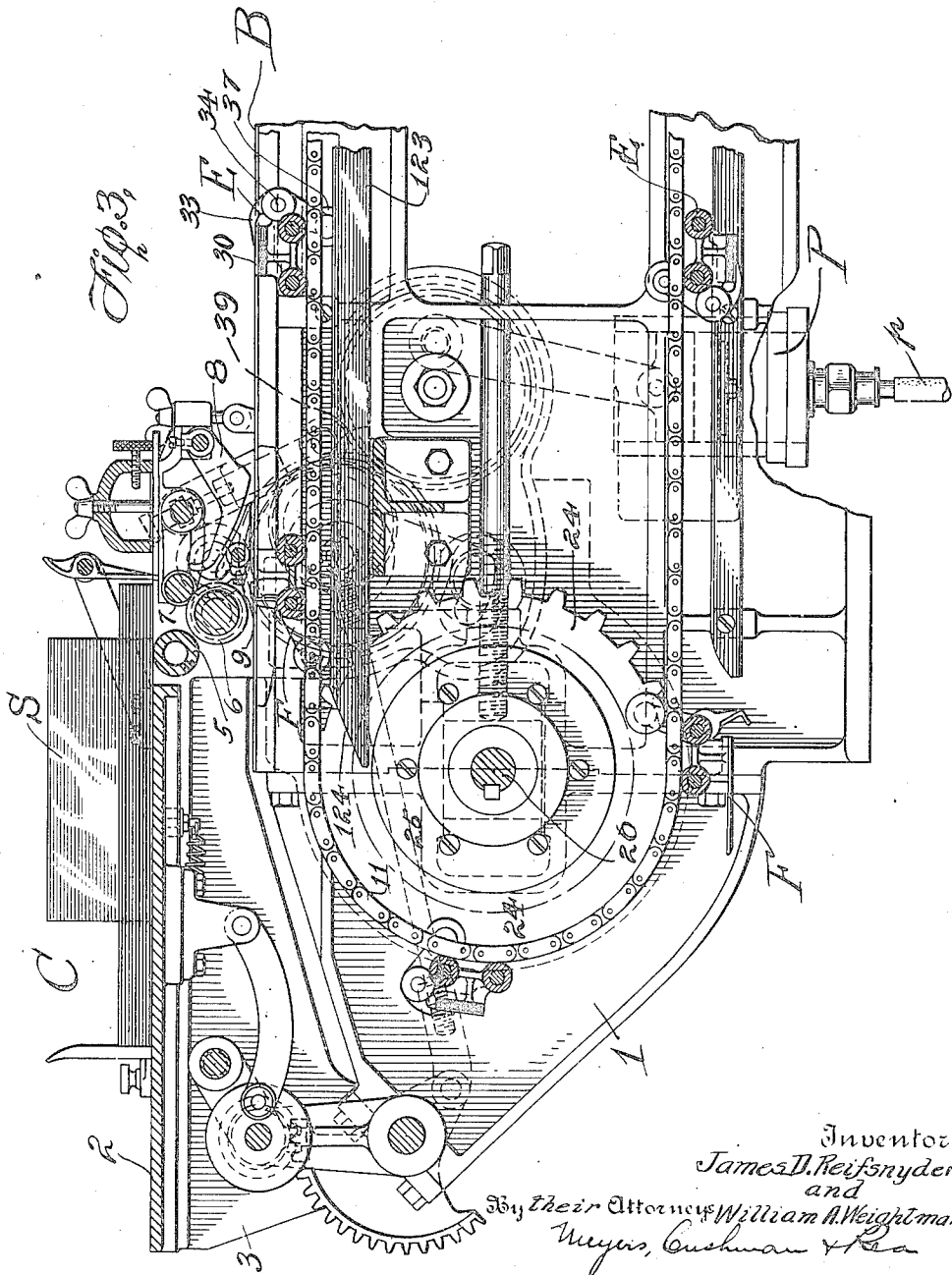


Fig. 2.

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APPLICATION FILED OCT. 14, 1916.

12 SHEETS—SHEET 3.



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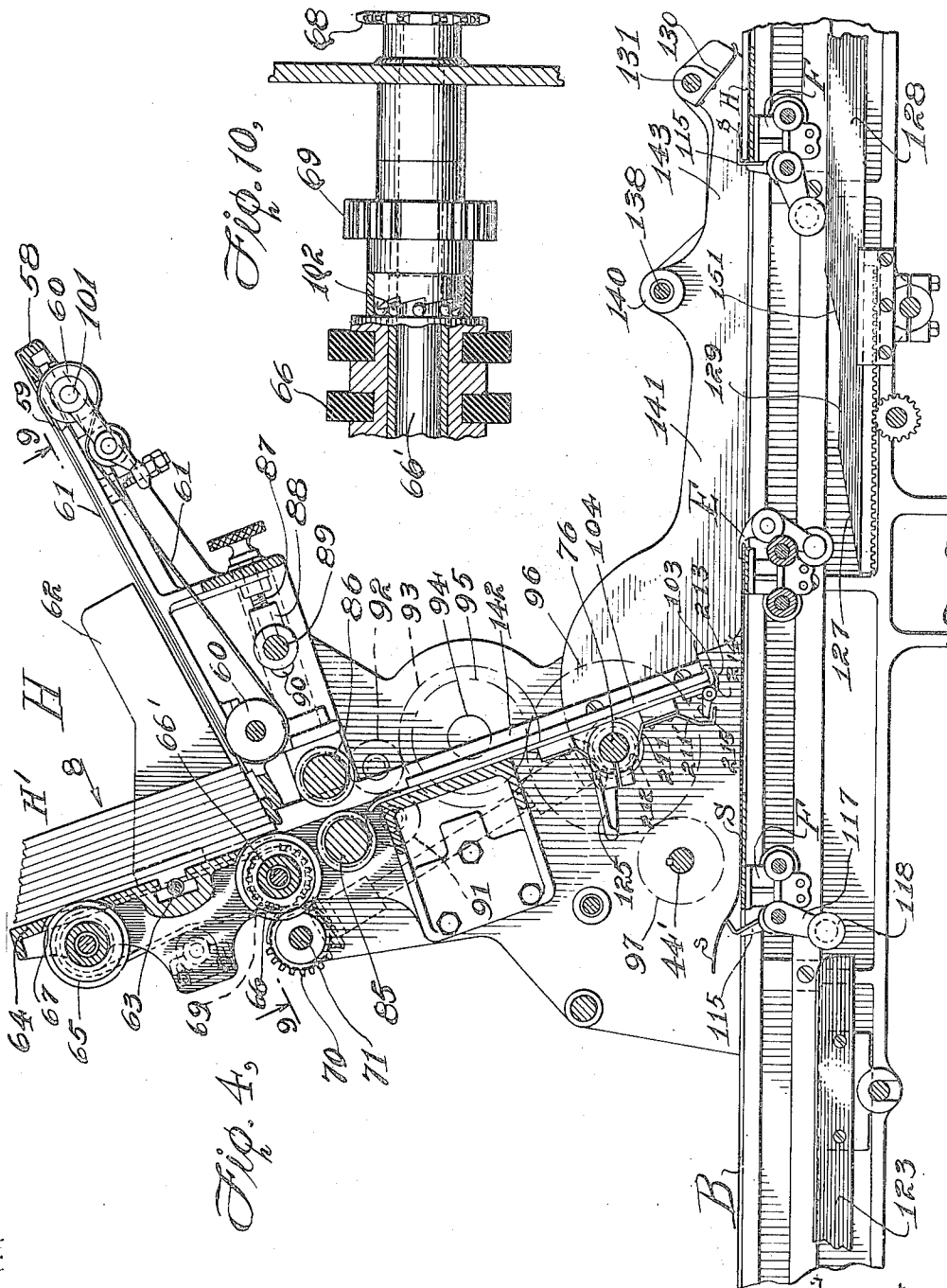
CATALOGUE WRAPPING MACHINE.

APPLICATION FILED OCT. 14, 1916.

1,269,308.

Patented June 11, 1918.

12 SHEETS—SHEET 4.



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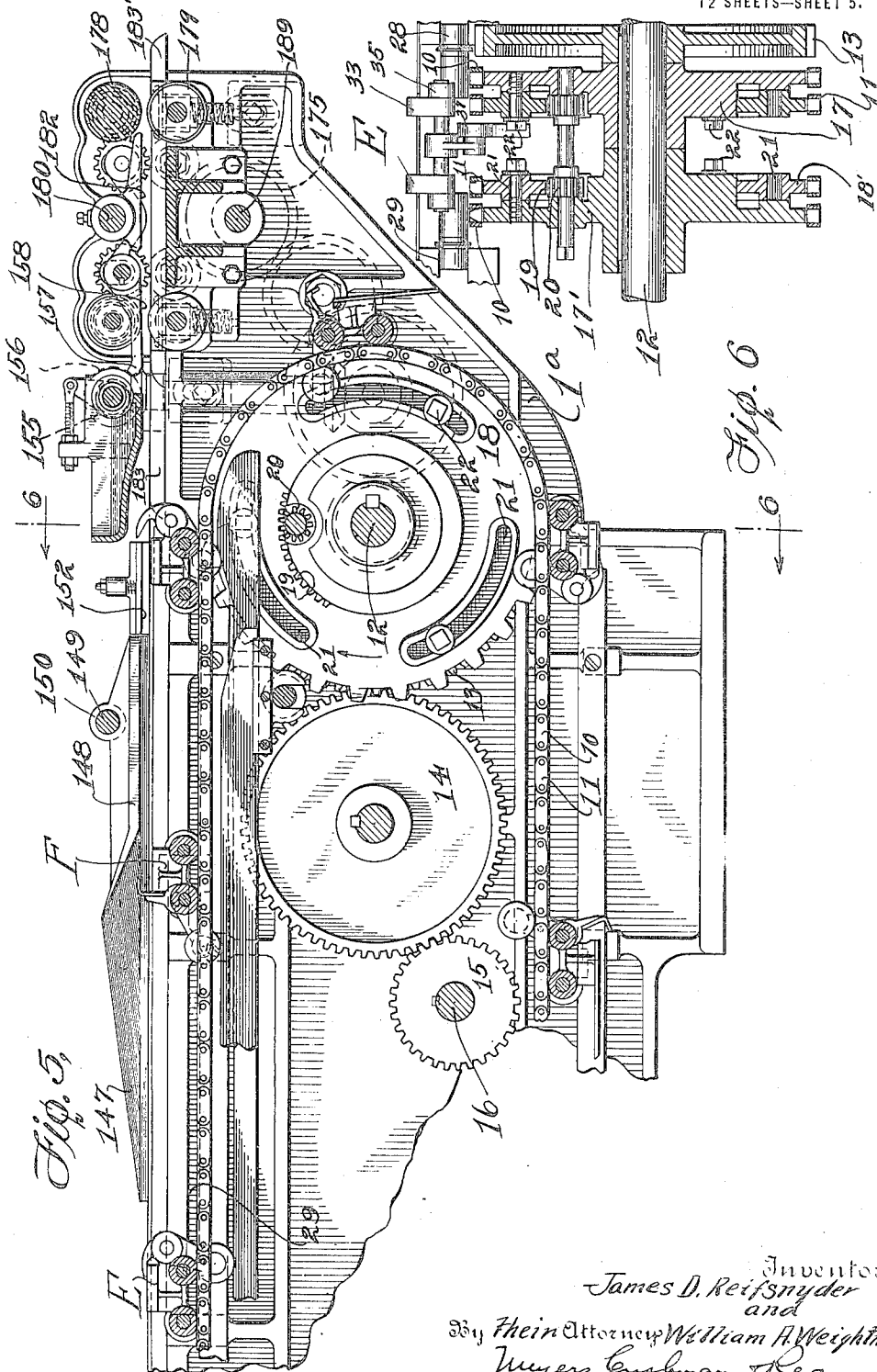
CATALOGUE WRAPPING MACHINE.

APPLICATION FILED OCT. 14, 1916.

Patented June 11, 1918.

12 SHEETS—SHEET 5.

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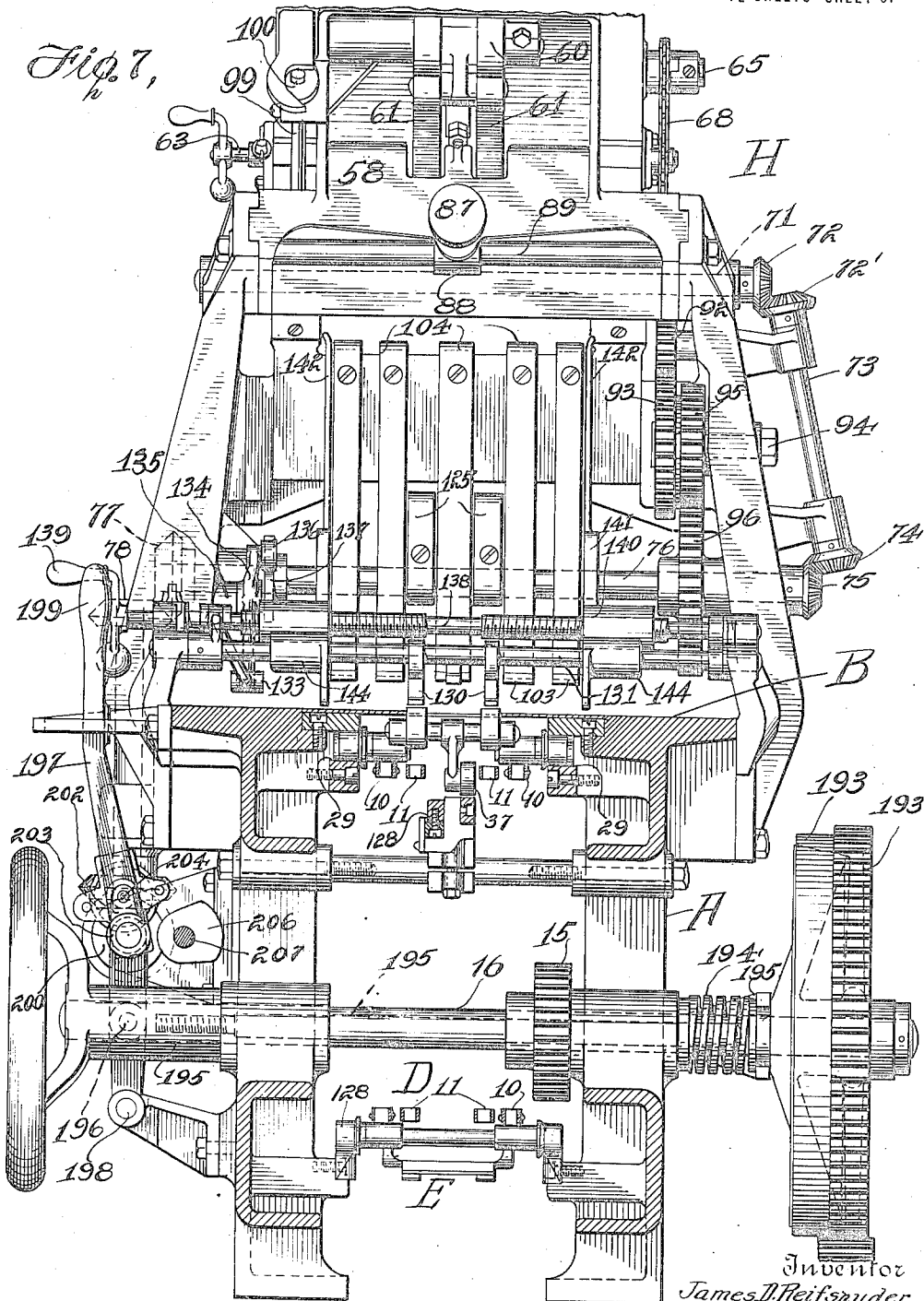
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Patented June 11, 1918.

12 SHEETS—SHEET 6.



CATALOGUE WRAPPING MACHINE.

Patented June 11, 1918.

12 SHEETS—SHEET 7.

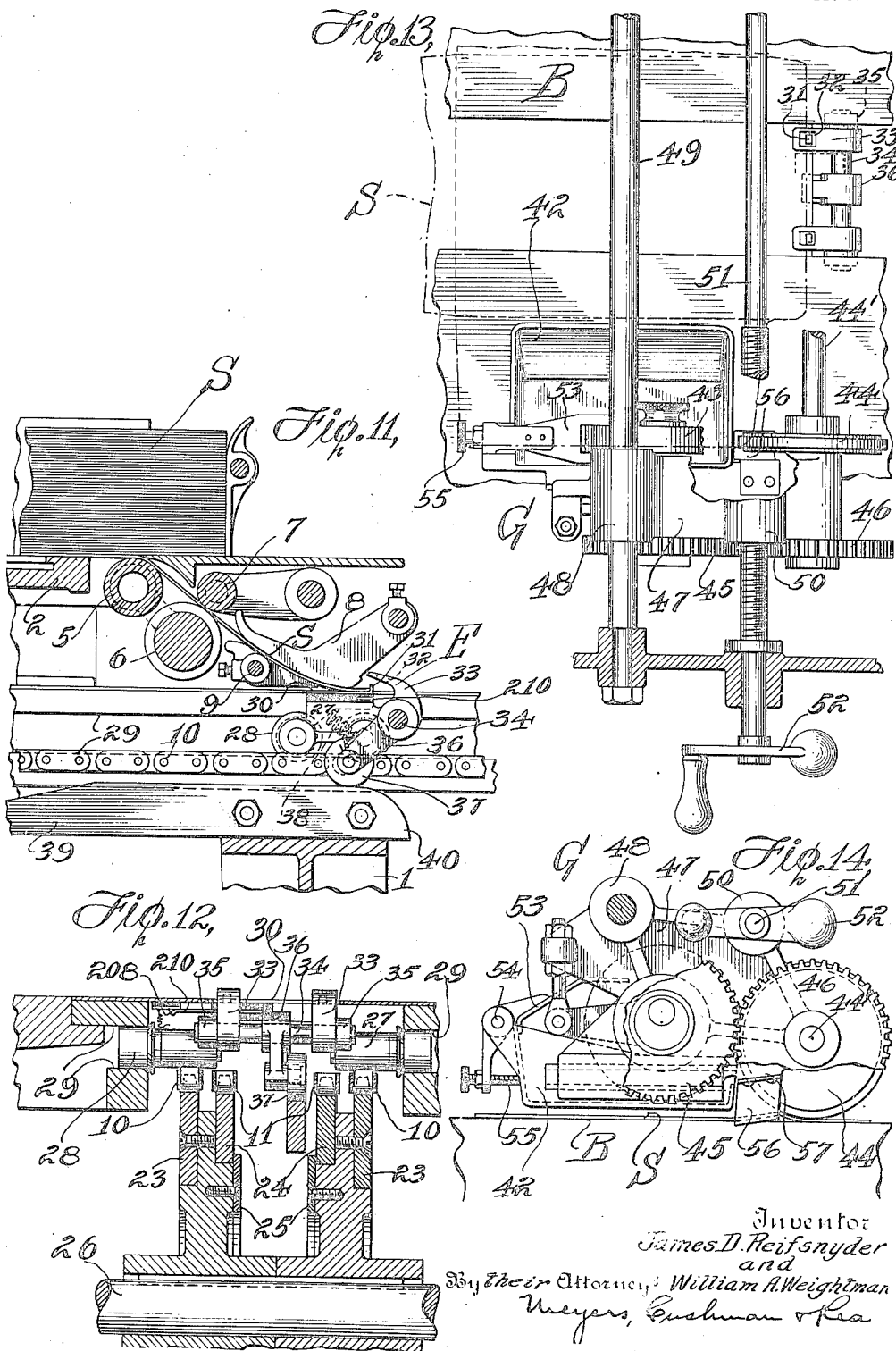
The image contains two detailed technical drawings of a printing press mechanism, labeled Fig. 8 and Fig. 9.

Fig. 8 is a side view of the mechanism. It shows a large horizontal cylinder (65) with a series of rollers (67, 68, 69, 70, 71, 72) mounted on its surface. A lever (73) is connected to the cylinder and has a handle (74) at its end. A series of vertical rods (75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85) are positioned below the cylinder. A horizontal bar (86) is connected to the rods. A vertical rod (87) is also shown. A handle (88) is attached to the bottom of the mechanism. A series of vertical rods (89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862,

1,269,308.

Patented June 11, 1918.

12 SHEETS—SHEET 8.

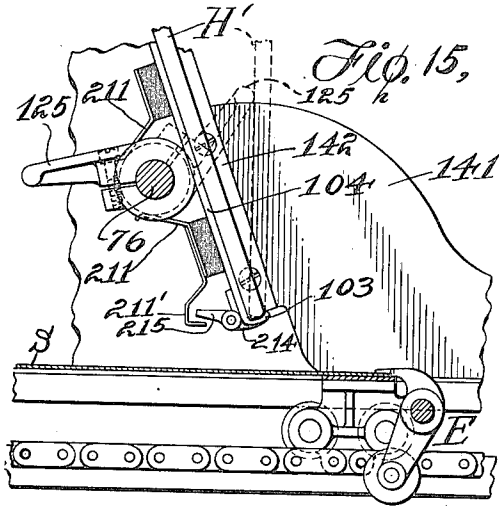
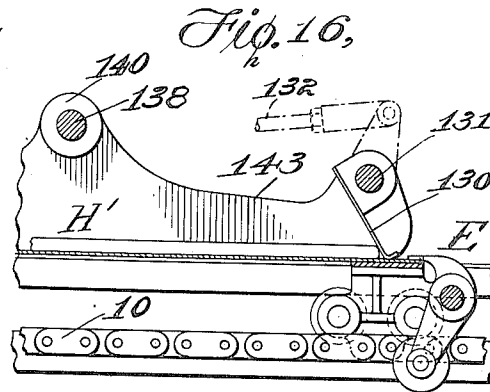
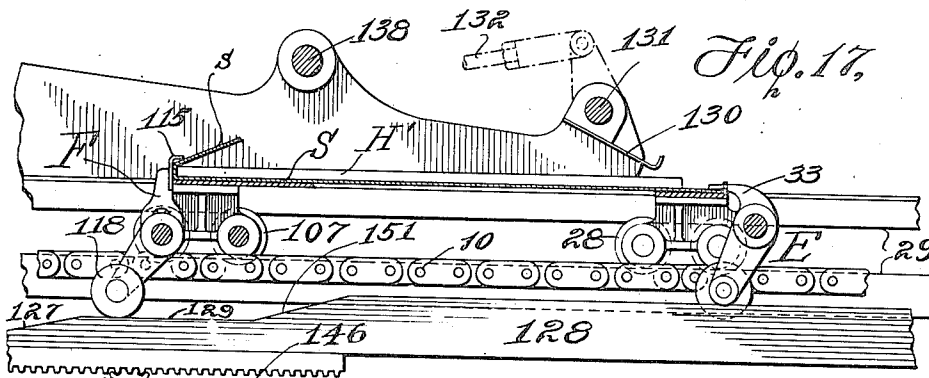
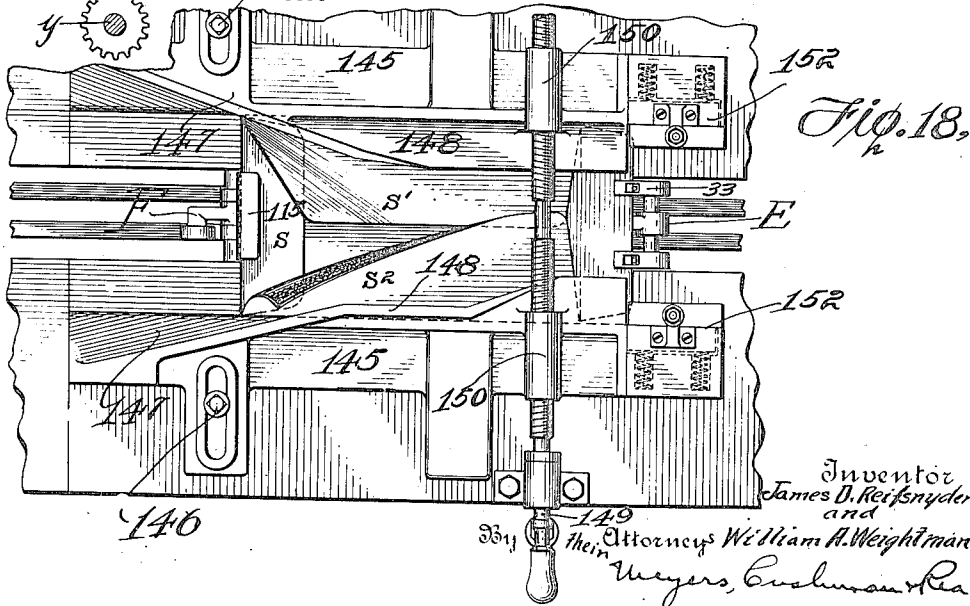


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CATALOGUE WRAPPING MACHINE.
APPLICATION FILED OCT. 14, 1916.

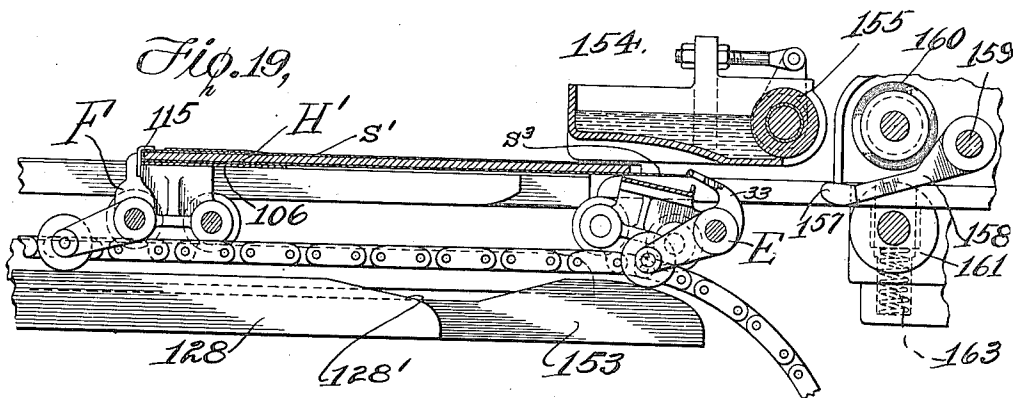
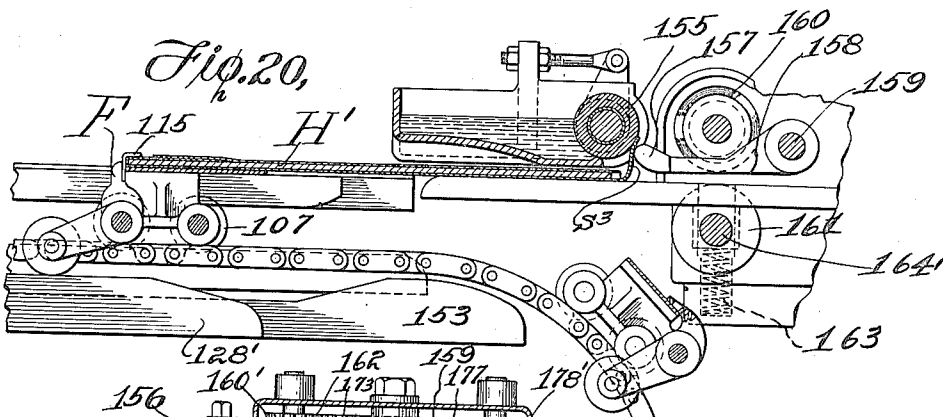
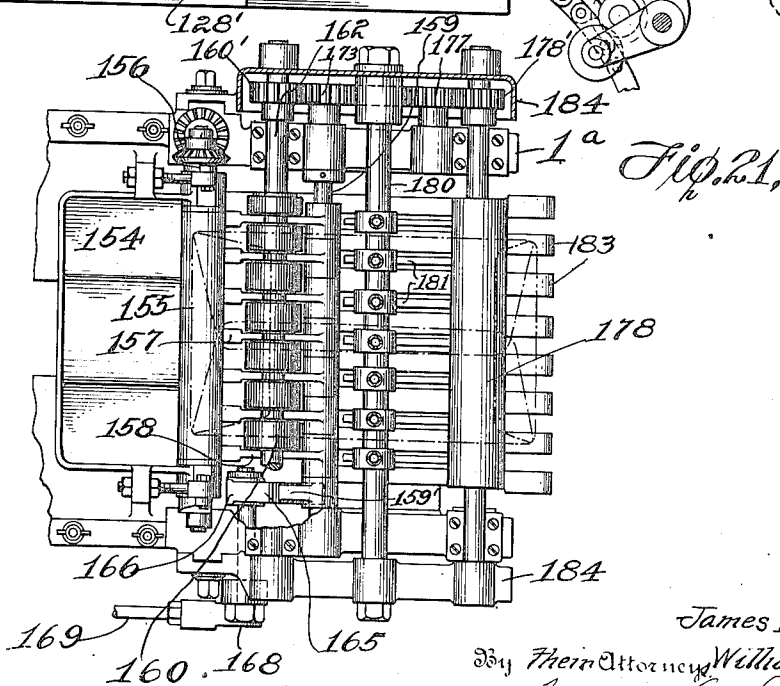
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Patented June 11, 1918.
12 SHEETS—SHEET 9.



1,269,308.

12 SHEETS—SHEET 10.



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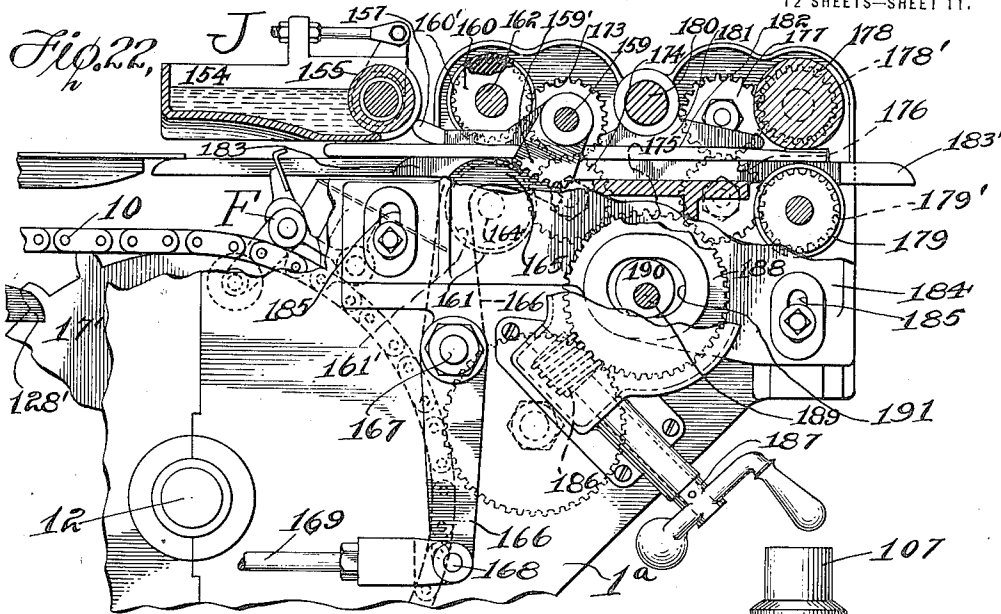
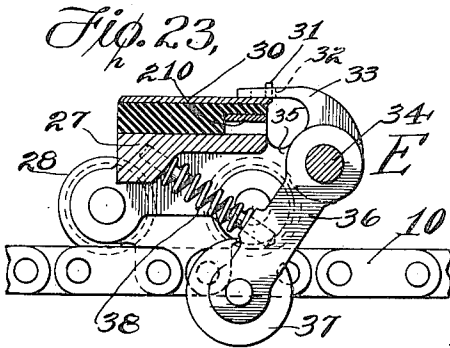
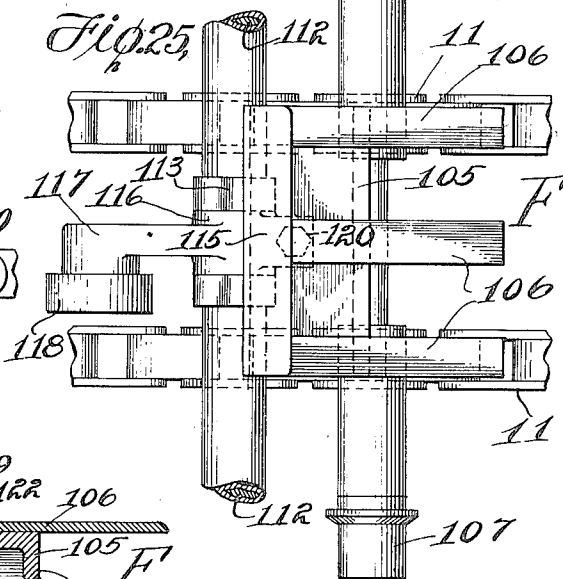
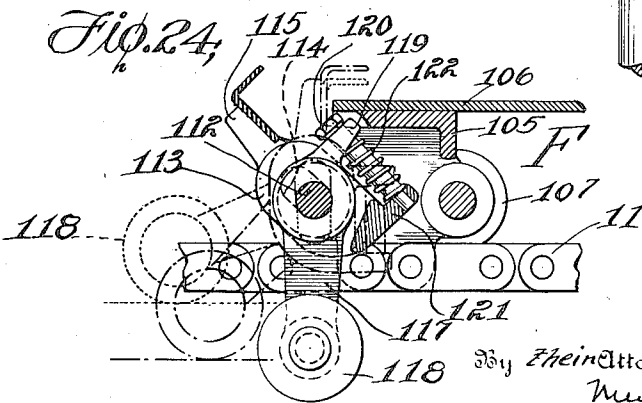
CATALOGUE WRAPPING MACHINE.

APPLICATION FILED OCT. 14, 1916.

1,269,308.

Patented June 11, 1918.

12 SHEETS—SHEET 11.



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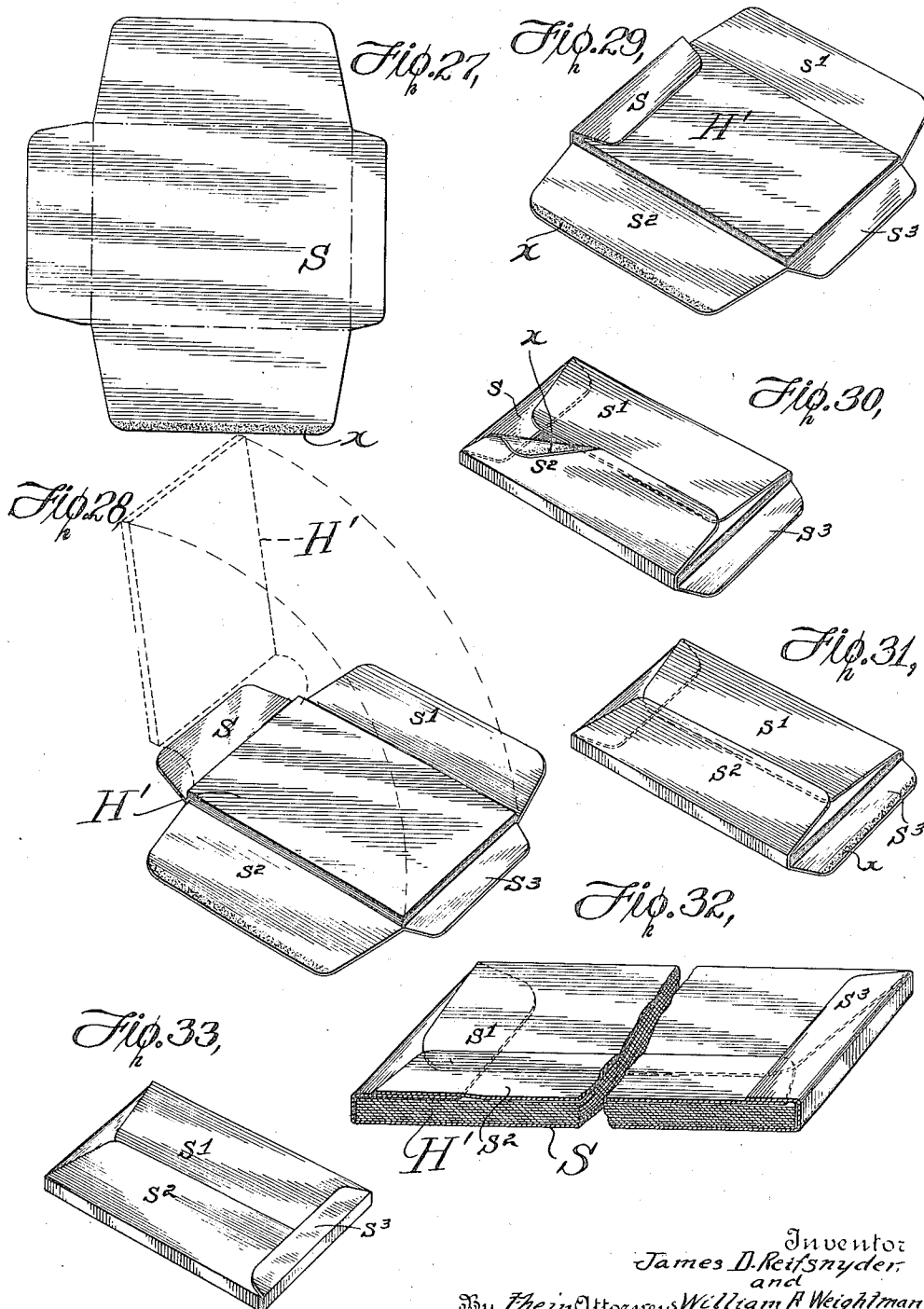
CATALOGUE WRAPPING MACHINE.

APPLICATION FILED OCT. 14, 1916.

1,269,308.

Patented June 11, 1918.

12 SHEETS—SHEET 12.



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UNITED STATES PATENT OFFICE.

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CATALOGUE-WRAPPING MACHINE.

1,269,308.

Specification of Letters Patent. Patented June 11, 1918.

Application filed October 14, 1916. Serial No. 125,550.

To all whom it may concern:

Be it known that we, JAMES D. REIFSNYDER and WILLIAM A. WEIGHTMAN, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Catalogue-Wrapping Machines, of which the following is a specification.

10 This invention relates to a wrapping machine through the agency of which cover or wrapper sheets or blanks may be rapidly, economically and conveniently applied to articles of various descriptions.

15 In the present instance we have shown and described our invention as employed for wrapping catalogues, books, pamphlets or the like, but this is merely for the purpose of illustrating, by a specific example, the function and mode of operation of the machine, and we wish it to be distinctly understood that the invention is not limited in its useful application to this particular purpose, as the machine may be used for wrapping articles or objects of any character whatsoever and in connection with which its employment may be deemed desirable or advantageous.

20 One purpose of the present invention is the provision of a machine wherein articles may be automatically and sequentially wrapped or incased so completely as to preserve the same against such soiling and injury as is liable to occur under ordinary conditions attendant upon handling, transportation and storage.

25 Another object is to provide a machine wherein wrapper blanks or sheets may be successively and continuously fed into position to receive the articles which in turn are sequentially and continuously presented to the blanks or sheets, certain instrumentalities acting upon the sheets and articles to accomplish the wrapping operation and then to convey the completely wrapped packages to a suitable point of discharge.

30 Furthermore, we propose to provide a machine capable of incasing or inclosing an article in an envelop or bag-like container or wrapper, which is formed from a single flat blank or sheet during the wrapping operation.

A further object of the invention is the

provision of a machine wherein during the wrapping operation certain over-lapped portions or sections of the wrapper are sealed or united through the medium of an adhesive, such as paste or the like, one end of the envelop or wrapper being preferably, though not necessarily, left unsealed, and being tucked in beneath an adjacent portion of the envelop or wrapper to form a free flap which may be withdrawn or opened to permit the ready removal of the inclosed article without the necessity of tearing or destroying such envelop-wrapper.

With the above recited objects and others of a similar nature in view our invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings:

Figure 1 is a view in side elevation of a wrapping machine embodying my invention.

Figure 2 is a plan view thereof.

Figure 3 is an enlarged view, partly in elevation and partly in vertical longitudinal section taken at the front, or sheet feeding end of the machine.

Figure 4 is a similar view of the central portion or catalogue-delivery section of the machine and showing the mechanism for feeding the catalogues to the sheets in which they are wrapped.

Figure 5 is a similar view of the rear or delivery end of the machine.

Figure 6 is a cross sectional view taken on a line 6-6 of Fig. 5.

Figure 7 is a similar view taken on the line 7-7 of Fig. 1.

Figure 8 is a face view of a portion of the catalogue-feeding mechanism looking in the direction of the arrow 8 of Fig. 4.

Figure 9 is a sectional view taken on the line 9-9 of Fig. 4.

Figure 10 is a view partly in section and partly in elevation of a portion of one of the catalogue-feeding rolls and the operating clutch mechanism thereof.

Figure 11 is a view partly in vertical section and partly in elevation showing in detail certain parts of the mechanism for feeding a blank or sheet to the gripper mechanism therefor.

Figure 12 is a detail view in rear elevation of the blank gripper mechanism.

Fig. 13 is a plan view of the pasting device for applying a stripe of paste to the side portions of the blank.

Fig. 14 is a view in side elevation of the pasting device shown in Fig. 13.

Fig. 15 is a detail view in side elevation showing the manner of feeding an article, such as a catalogue, to the wrapper blank or sheet.

Fig. 16 is a similar view of the pusher stop for properly positioning the catalogue on the partially folded blank.

Fig. 17 is a view in side elevation showing a gripper folding up one end or flap onto the article.

Fig. 18 is a plan view of the side folding devices for folding over the sides of the blank or sheet upon the article.

Fig. 19 is a view partly in vertical longitudinal section and partly in elevation showing the sheet gripper being opened with a magazine pushed forward by the catalogue pusher.

Fig. 20 is a similar view showing the devices for applying an adhesive to an end flap of the wrapper.

Fig. 21 is a plan view of the adhesive applying device for the end of the wrapper and the delivery mechanism for the wrapped package.

Fig. 22 is a view in elevation partly broken away and showing the article, or catalogue subjected to the pressure rolls co-operating device.

Fig. 23 is a detail view partly in section and partly in elevation of the sheet gripper.

Fig. 24 is a similar view of the article or catalogue pusher gripper and showing the three positions it is intended to assume.

Fig. 25 is a plan view of the catalogue pusher gripper.

Fig. 26 is a diagrammatic view of the electrical arrangement for automatically controlling the machine.

Figs. 27 to 33 are perspective views illustrating the various stages in the wrapping of the article.

Before entering into a detailed description of our invention we will briefly state that it embodies, among other features, a table or support upon which may be placed a stack or pile of the flat sheets or blanks from which the wrappers for the catalogues are to be formed one of the wrappers or blanks being shown in Fig. 27. Suitable sheet selecting and feeding mechanism take these sheets successively and carry or present the same to sheet gripping devices mounted upon and traveling with endless carriers, in the present instance in the nature of chains traveling over suitably arranged sprockets, the chains running beneath the bed of the machine. When a flat sheet or blank coming from the sheet selecting and feeding mechanism is grasped by one of these grippers it

is carried in the travel of the latter to an adhesive or glue applying device which applies glue along one side portion of the sheet and the latter is then carried to a position directly beneath the catalogue-feeding mechanism. In the present instance this catalogue-feeding mechanism includes a magazine or hopper in which a stack or pile of the catalogues are placed in an approximately upright position or are up-ended. The catalogues are fed one at a time from this stack or pile and permitted to drop onto a bracket-like support, each catalogue so dropped still maintaining its approximately upright position. When the sheet is brought beneath such catalogue, the latter is tilted or swung forward and downward and permitted to drop flat, or to a horizontal position upon the subjacent sheet, as diagrammatically indicated in Fig. 28. The continued movement of the endless carrier now conveys the sheet with the catalogue lying flat thereon away from beneath the catalogue feeding device and one end of the blank is folded over one end of the catalogue to form a loose, free flap, as indicated in Fig. 29. The wrapper with the catalogue thereon is now brought by the carrier into position to have one of the side sections of the blank folded over against the uppermost face of the catalogue. The other or adhesively coated side portion of the blank is now folded inward so as to overlie the opposite side portion of the blank, both of these inwardly folded side portions overlying the previously folded end portion of the blank, and the adhesive at the edge of the overlying side portion causes the latter to adhere to the adjacent longitudinal edge portion of the opposite side portion of the blank, as is indicated in Fig. 30; the initially tucked-in end flap remaining free, that is to say, is preferably not pasted or attached to the adjacent side sections of the blank by the adhesive. This leaves but one end portion of the wrapper to be folded and fixed in position, and the continued travel of the carrier brings this end portion or end flap into position to receive a strip or coating of adhesive on the free edge portion thereof as is indicated in Fig. 31. This adhesively coated end portion is now folded over into overlapping relation with the adjacent end sections of the folded side portions of the blank, as shown in Fig. 32, and the adhesive causes the end portion to adhere to the underlying wrapper sections. The catalogue thus completely wrapped, as shown in Fig. 32, is now passed through suitable rollers, or pressure devices, which causes the close adherence of the adhesive and seals the package so that it appears as shown in Fig. 33, the package thus completely wrapped and sealed being discharged from the machine. In connection with our machine, we pro-

vide automatically operating means for automatically throwing the machine under certain conditions, as for instance when the feeding devices fail to properly feed a sheet to the grippers on the carrier, or when a catalogue is not properly delivered to the traveling carriers.

It is of course to be understood that the various power transmitting connections and operating devices are so proportioned and timed in their relative movements that the various operations will take place in the order described.

Referring now to the accompanying drawings in detail, the letter A indicates the frame of the machine which includes a suitable longitudinally slotted bed B. At the front end 1, of the frame is located a sheet-feeding mechanism which is indicated as an entirety by the letter C, and is best shown in Figs. 1, 3 and 11. It is to be understood that this sheet-feeding mechanism may be of any suitable type or character for feeding sheets individually and successively to the traveling carrier of the machine, and which carrier is indicated as an entirety by the letter D.

In the present instance we have shown a sheet feeding mechanism of well known form, illustrating and describing only such parts thereof as may be necessary to understand its coöperation with the remainder of the present machine. In the type of sheet-feeding mechanism illustrated herein, the stack or pile of sheets, indicated at S, is mounted upon a reciprocating table 2 carried by the swinging frame 3, this frame being swung by means of the worm and sector gear 4. As will be understood by reference to Fig. 11, as the table reciprocates across the top of a suction picker roll 5, the bottom sheet of the pile or stack is withdrawn by this picker roll. As will be understood by reference to Fig. 3, the picker roll is intermittently subjected to suction through the agency of a suitable suction pump P, suitably connected in driving relation with the power transmission devices of the machine, a suction pipe conventionally illustrated at *p* leading from this pump to the picker roll. As this arrangement of sheet-selecting suction device is also well known, it need not be further described here in detail.

Referring again to Fig. 11, as each bottom sheet is selected or picked off from the bottom of the pile or stack by the picker roll it is carried down between feed rollers 6 and 7 and the guides 8 and 9 to a sheet gripper device E of the carrier or conveyer D. This carrier or conveyer D in the present instance embodies two pairs of endless chains 10—10 and 11—11 traveling over two pairs of sprockets adjacent opposite ends of the frame, the four endless chains

traveling longitudinally of and beneath the slotted bed of the machine. One pair of endless chains, for instance, that made up of the two outside chains 10—10 carries a series or set of sheet grippers E, while the other or inside pair of endless chains 11—11 carries a series or set of other gripping devices such as are shown at F, and which for the sake of convenience and distinction, may be termed pusher grippers inasmuch as their purpose and function is to grip and push the catalogues, books or the like.

As shown in Figs. 5 and 6, at the rear end 1^a of the machine is a sprocket shaft 12 which is driven through the train of gears 13, 14 and 15, the latter being on the power shaft 16. On said shaft 12 are mounted the two sprockets 17 and 17' which form the outside sprockets over which travel the chains 10—10, and these two sprockets 17—17' have adjustably connected therewith the inner pair of sprockets 18 and 18' over which travel the inner pair of chains 11. The adjustment of the sprockets 18 and 18' relative to the sprockets 17 and 17' is accomplished through the racks 19 and pinions 20, and it will be noted that each of the sprockets 17 and 17' is slotted as at 21 for the reception of the adjusting screws 22 of the companion sprockets 18—18'. Inasmuch as the sheet grippers E are carried by the outside pair of chains and the catalogue pusher grippers F are carried by the inside pair of chains, the adjustment of the sprockets just described enables the distance between a sheet gripper and a catalogue pusher to be made greater or smaller. We might here mention that a sheet gripper E and a pusher gripper F constitute a pair of gripping devices for conveying the wrapper and a catalogue through the machine, and of course these grippers E and F are arranged in alternate relation for this purpose. As shown in Fig. 12, at the opposite or front end 1 of the machine the outside pair of chains 10 travel over the sprocket members 23 while the inside pair of chains 11 run over the sprocket members 24, the sprockets 24 being loosely mounted upon the sprockets 23, and are held in place by the annular plates 25 which are bolted to the body of the sprockets 23. The sprockets 23 are keyed upon their shaft 26 and this shaft 26 in turn drives other mechanisms of the machine, as will be hereinafter described.

We will now describe the specific construction of one of the sheet grippers E, and as all of the sheet grippers E are similar a description of one will suffice.

Referring especially to Figs. 23 and 26, it will be seen that each gripper comprises a carriage 27 provided with the four rollers 28, one pair at each side of the carriage;

these rollers traveling in a path including the upper and lower guideways 29 beneath the bed of the machine, (see Fig. 7). Upon the carriage 27 is mounted the insulated platform or plate 30, preferably in the nature of a metal sheet and provided with a pair of spaced upstanding studs 31 which constitute front stops for the forward edge of the sheet of paper, these studs being adapted to project through the openings 32 in the spaced hooks 33 of the gripper. These hooks 33 which are adapted to clamp the forward edge portion of the paper against the plate 30 are fast with the rock shaft 34 mounted in the bearings 35 which form a part of the carriage body, as shown in Fig. 6. At the center of this shaft 34 is fastened one end of an arm 36, the opposite or free end of which carries the cam roller 37. The gripper hooks 33 are normally held closed or in contact with the plate 30 by means of the expansion spring 38, but when the roller 37 rides upon the cam track 39 as shown in Fig. 11, the gripper hooks will be opened against the action of the spring 38 to move the gripper hooks into one position and permit the forward edge of the sheet to engage the front stops or rods 31. Immediately, however, the cam roller 37 of the gripper E rides or passes down the curved end 40 of the cam bar 39, the gripper hooks will be automatically thrown into closed position by the spring 38. The sheet S being thus grasped by the gripper E, as shown in Figs. 13 and 14 is carried forward to the glue applying device to have one longitudinal side edge portion coated with a stripe of glue. As the catalogue pusher grippers have not up to this time been brought into active operation we will reserve a specific description of the same until describing the part which such pusher grippers play in the wrapping operation. The glue-applying device, which is indicated as an entirety by the letter G, and by means of which the glue is to be applied to one side edge or flap of the sheet, as shown in Fig. 27 at *a*, is preferably constructed as follows: Referring to Figs. 13 and 14, this glue-applying device G comprises the glue tank 42 in which works the glue-wallower roller 43 which contacts with the glue-applying roller 44, the upper portions of the peripheries of these rollers meeting above the glue tank, and these rollers 43 and 44 are geared together by means of the gears 45 and 46. The glue tank 42 is carried by a frame 47, the sleeve 48 of which slides on the rod 49, while a second sleeve 50 of this bracket is threaded and receives the adjusting screw 51 having the operating handle 52 at one end thereof. By operating the handle 52 in the required direction the glue tank together with the glue rollers and their accompanying parts may be adjusted laterally of the path of travel

of the envelop to the requisite distance for properly applying a stripe of glue to an edge portion of the sheet, the degree of adjustment depending, of course, upon the width of such sheet. The amount of glue on the wallower roll may be regulated and rendered uniform by means of a scraper blade 53 swingingly mounted on the stud 54 and adjustable to and from the wallower roller by the set screw 55. As will be seen from Fig. 14, the glue-applying roller 44 does not touch or contact with the portion of the bed B therebeneath, but is slightly spaced apart therefrom; and in order that the traveling sheet may receive its proper stripe of glue a small angular guide plate 56 is provided which is bolted to the adjacent portion of the bracket 47, as at 57, and the bottom of this guide is slightly inclined to the horizontal so that the sheet in its passage will be moved upward in position to contact with the periphery of the glue-applying roller and receive the glue therefrom. After the sheet has received its stripe of glue from the glue-applying mechanism it continues its forward travel and is brought beneath the catalogue-feeding mechanism which is adapted to supply the catalogues successively, one for each wrapper sheet brought into position therebeneath; this catalogue-feeding mechanism being indicated as an entirety by the letter H. Referring to Figs. 4, 7, 8, 9, 15 and 16, it will be seen that it comprises an inclined table 58 having spaced slots 59 through which partially project the pairs of rollers 60 and over these rollers run the endless feed tapes or belts 61. The catalogues shown at H' are stacked on end on this inclined table as shown in Fig. 4, suitable confining side boards being mounted on the right and left hand screw rod 63 by means of which the boards are adjustable toward and from each other to accommodate catalogues of various widths. The catalogues are held stacked against the vertically inclined plate 64 as shown in Fig. 4, by means of the inclination of the horizontal table 58, and are normally fed down to this position by the endless tapes before referred to. The catalogue which is in position to be fed to the wrapper mechanism rests against this plate 64 and in contact with the preferably rubber faced rollers 65 and 66, the peripheries of which project through slots 67 and 67' in this place, and thus slightly beyond the front face of the plate so the foremost catalogue will rest in contact with these rollers 65 and 66, which are geared together in driving engagement to the endless chain 68, until the lowermost roller 66 is rotated by means of the intermittent gear 69, and its clutch connection shown in Fig. 10. This gear 69 in turn is driven through a mutilated gear 70 mounted on the shaft 71, as shown in Fig. 9,

and this shaft 71 in turn is driven through the bevel gears 72 and 72', the latter being mounted on the shaft 73, the bevel gear 74 of which receives motion through its corresponding bevel gear 75 on the shaft 76, this shaft having at its opposite end a bevel gear 77 which meshes with the similar bevel gear 78 on the vertical shaft 79, the latter being driven through the bevel gears 80 and 81, which in turn receive motion through the shaft 82 connected in driving engagement with the sprocket shaft 26 through the bevel gears 83 and 84, the sprocket shaft 26 being driven as heretofore described. Thus the lower feed roller 66 will receive an intermittent motion and in turn will impart a corresponding motion to its companion roller 65. This will cause the contacting catalogue to be fed downward until its lower portion contacts with the roller 85 mounted parallel with and beneath the roller 66. The magazine will pass between this roller 85 and the corresponding roller 86 carried by the framework of the table 58, as shown in Fig. 4, and, referring to this figure, it will be understood that the table 58, the frame of which carries this roller 86, is bodily adjustable toward and from the catalogue-supporting plate 64 by means of the adjusting screw 87 threaded in the screw sleeve 88 loose on the tie-rod 89, the frame of the table having slots 90 therein to permit of this. This arrangement is simply to vary the opening or space between the forward edge of the table and the plate 64 and between the feed rollers to permit the handling of catalogues of various thicknesses. The two rollers 85 and 86 are driven through the intermeshing gears 91 and 92, the gear 92 being driven through the relatively large gear 93 on the stud shaft 94, this gear 93 having integral therewith a smaller gear 95 driven from the gear 96 on the shaft 76, and it will be further understood that this gear 96 meshes with and drives the gear 97 on the shaft 44' of the glue-applying roller 44 so that motion will be imparted through the shaft 44' to the gears 46 and 45 of the glue rollers thereby rotating the latter to insure the presentation of freshly glued surfaces to the sheets. The feed tapes or belts 61 of the catalogue table 58 are intermittently driven by means of the intermittent bevel gears 98 and 98', the latter being on the shaft 99, which is geared through a pair of spiral gears 100 to the shaft 101, of one of the pair of rollers 60, and by means of this intermittent driving of the belt 61 the catalogues will receive an intermittent feed toward the plate 64. As the catalogues are fed down between the feed rollers 85 and 86, it is to be understood that these latter rollers normally revolve at a little greater speed than the rollers 65 and 66. However, after the catalogue has passed in between these rollers 85 and 86 and is en-

gaged thereby, so as to continue to feed downward, the roller 66 will be revolved at a greater speed than is normally imparted to it by its usual driving or power transmission mechanism. This is accomplished by the ball and ratchet clutch drive as will be seen by reference to Fig. 10. This roller 66 is loose on its shaft 66' and between this roller and its driving gear 69 there is interposed the ball and ratchet clutch 102 which operates in the usual manner, that is to say, as the gear 69 is turned it turns with it the ratchet faced hub of the clutch and consequently causes the balls of the clutch to ride on these ratchet faces and bind against the end of the roller 66 thereby driving the latter in one direction. When the rollers 85 and 86 draw the catalogue along at a greater speed than the normal rotation of the roller 66 this roller travels at the same speed as the catalogue thereby reducing friction between the same, which would occur if the roller 66 was rotating at its initial speed. The catalogue being fed downward by the feed rollers 85 and 86 drops onto the out-turned ends 103 of the flat bars 104, these bars forming a grid bracket or support for the catalogue.

Now after the sheet gripper E has taken a sheet from the sheet feeder, as shown in Fig. 3, it carries this sheet along in the travel of the conveyer and past the glue applying device as indicated in dotted lines in Fig. 13, so that the stripe of glue X is applied to one longitudinal edge of the sheet, as before stated and as indicated in Fig. 27. It will be noted that the sheet is carried between a gripper E and one of the pusher grippers F. The construction of these pusher grippers will be readily understood by reference to Figs. 24 and 25. Each pusher gripper comprises a carriage 105 surmounted by a plate 106 forming a platform. This carriage is provided with the four wheels 107 traveling in the trackways, the carriage of course being attached to the chains 11. Mounted on the axle 112 of the carriage is a depending yoke 113, the parallel arms of which are formed with elongated slots 114 through which the axle 112 passes. This yoke carries an upwardly extending hooked arm 115 which is adapted to engage the rear end of the catalogue, as hereinafter described. Loosely mounted upon the axle 112 between the arms of the yoke is a collar 116 carrying an arm 117 provided at its free end with a cam roller 118. This collar 116 is also formed with a projecting lug 119 bored for the passage of the pin 120, the lower end of said pin being socketed in the bight 121 of the yoke, and a coil expansion spring 122 surrounds this pin 120 between the lug and the bight of the yoke. The normal tendency of the spring is to hold the pusher in open position, with the cam

roller arm hanging vertically as shown in Fig. 24. When, however, in the travel of the carriage the pusher gripper reaches the cam bar 123 located beneath the sheet feeding mechanism as shown in Fig. 3, it will ride up the inclined face 124 thereof, and the cam arm will be elevated so as to throw the hooked arm 115 to the position shown in dotted lines in Fig. 24, and thus the pusher gripper may pass freely beneath the sheet feeding devices. It continues in this position so long as the cam wheel 118 rides on the bar 123. At this point I might mention that, as indicated in Fig. 24, this pusher gripper has three distinct positions which it may assume, that is to say, the wide open position indicated in full lines in said figure, the intermediate position as indicated in dot-and-dash lines wherein the hook of the arm 115 overlies the platform 106, but is elevated a considerable distance therefrom, and the final catalogue gripping position, indicated in dotted lines in said figure wherein the hook of the arm is depressed toward the platform as when gripping the catalogue. These positions will be referred to later on, but at the time the pusher gripper is riding on the cam bar 123 it is, as before stated, moved to its depressed or dotted position to enable it to safely pass the paper sheet feeding guides.

Referring to Fig. 4, when the pusher gripper drops off over the rounded end of the cam bar 123 it flies to its open position, at which time the sheet is being drawn through the glue-applying device and the upward and backward movement of the hooker arm 115 will lift up the rear end of the sheet, as shown in Fig. 4. The sheet is now brought by the carrier directly beneath the catalogue feeding device with the two grippers occupying the positions shown in Fig. 4, and the catalogue which is resting upon the bracket grid is tilted over and onto the sheet by the kicker blocks 125 fast on the shaft 76 and which have been brought into position by the turning of the shaft into position to push the catalogue off the bracket, as shown in Fig. 15. The catalogue thus falls face downward upon the sheet and is carried along thereon. In the progress of the carrier the cam roller 118 of the pusher gripper rides up the inclined face 127 of the stepped cam bar 128, and onto the level section 129 thereof, shown in Fig. 4. This causes the hooker arm 115 of the pusher gripper to assume its intermediate position shown in Fig. 17, and thus fold over the rear end lap *s* of the sheet on the catalogue. The continued travel of the carrier brings the forward end of the catalogue up against the rocking pusher fingers 130, as shown in Fig. 16, and these pusher fingers shove the catalogue slightly rearward on the wrapper sheet so that the rear end of the catalogue will snugly seat or fit in

the folded end flap. These rocking pusher fingers 130 are mounted on a cross shaft 131 located above the bed of the machine, and this shaft is rocked at proper intervals through the link bar 132 connected at one end to the rod and at its opposite end as at 133 to the lower end of a rocking cam lever 134 mounted on the stud 135 carried by the frame of the machine, the upper end of this lever 134 having a cam roller 136 operated by the cam 137 on the shaft 76. Extending parallel with the shaft 131, but somewhat in advance thereof, is a second shaft 138, which is in the nature of a right and left hand screw thread and is operated by a suitable handle 139. This shaft has threaded thereon a pair of spaced sleeves 140 carrying the guide bars 141 which terminate at their free end in the vertically inclined guide arms 142. The sleeves 140 are preferably connected through webs 143 with the sleeves 144 on the shaft 131, these latter sleeves each carrying one of the pusher fingers 130. Of course the vertical arms 142 and the side bars 141 act as side guides for the catalogue in its travel and they together with the fingers 130 on the sleeves 144 may be adjusted laterally toward and from each other to accommodate hooks or catalogues of different widths.

As the carrier *D* with the catalogue in its wrapper held as shown in Fig. 17 continues its travel, it brings these to the side folders 145, as shown in Fig. 18. These side folders which are adjustable toward and from each other by means of the pin and slot connection 146 are of a well-known form, and together constitute a folder or former having a flaring mouth formed of the vertically inclined sides 147 gradually merging into the inturned parallel sections 148 so that the two side sections of the wrapper sheet will be folded over on the catalogue and in overlapping relation to the end flap *s*. By reference to Fig. 18 it will be seen that owing to the peculiar formation of the two folding plates, the unglued side *s'* of the sheet will be first folded over, and subsequently the glued section *s*² of the sheet will be folded over on the section *s'*. These two folder plates 145 are adjustable toward and from each other by means of the right and left handed screwed shaft 149 passing through the threaded sleeves 150 of the plates. Just before the catalogue with its wrapper passes into the side folder, the cam roller 118 of the pusher gripper rides up the second inclined wall 151 of the cam bar 128, and onto the top edge of this bar, as shown at the right hand side of Fig. 4, and this moves the hooked arm 115 to its final or dotted position shown in Fig. 24, thus firmly gripping the end of the catalogue and the end flap *s* overlapping the latter, in which condition the catalogue passes into the side folder as indicated in Fig. 18. At this time, of course, both the

sheet gripper E and the pusher gripper F are gripping the partially wrapped catalogue and carrying it along with the travel of the carriage. However, as the sheet gripper E completes the operation of drawing the partially wrapped catalogue through the side folders and past the spring tension creasing blocks 152 which crease or press the side folders of the wrapper along the longitudinal side edges of the catalogue, this sheet gripper E rides up on the cam bar 153 and is opened thereby as shown in Fig. 19, thus releasing its hold on the package and then continues its travel around the sprockets, the gripper again closing by the action of its spring immediately it leaves the cam bar 153, as will be seen by reference to Fig. 20. The pusher gripper F, however, pushing against the rear of the package carries the latter beneath the glue pan 154 in which works the glue roller 155, this roller receiving a rotary motion through the intermeshing bevel gears 156 which may be given by any suitable power transmission gear. As the forward end section of the wrapper sheet reaches the position beneath this glue roller 155 the terminals 157 of the rocking fingers 158, engage the under face of the end portion of the sheet, and as these fingers rock upward on their shaft 159, the end of the sheet shown at s' in Fig. 20 is pushed against the glue roller and receives a coating of glue therefrom. The continued advancing of the package by the pusher gripper now carries it beneath the presser rollers 160 and 161, the presser roller 160 being formed by a series of annular preferably rubber disks mounted in spaced relation on a shaft 162, and between which disks the fingers 158 project. The lower presser roller 161 may be likewise constructed, but is preferably tensioned and held up to its work by means of springs 163, yieldingly supporting the bearings of the shaft 164 of the lower roller.

The rock shaft 159 receives its motion through the tooth segment 159' which meshes with the arcuate rack 165 at the upper end of the lever 166 mounted to swing on the pivot stud 167, the lower end of this lever being connected at 168 to the link rod 169, the latter in turn being pivoted as at 170 to the lever arm 171 mounted to rock back and forth on the shaft 172. The presser roll 160 has a gear 160' which is driven through a gear 173 loose on the shaft 159, this gear in turn being driven by a corresponding gear 174, which also meshes with and drives the gear 161' of the roll 161. This gear 174 is driven through the large gear wheel 175, and through this gear 175 are also driven the intermeshing gears 176 and 177 which drive the gears 178' and 179' of the rear presser rollers 178—179. On the transverse rod 180 are mounted the hangers 181 for the upper horizontal presser bars 182, which act

to bear against the upper surface of the catalogue and properly guide the same to the rear or last set of presser rolls. The presser device J also includes a table-like support, made up of the spaced parallel bars 183 upon which the catalogue rests in its travel through the presser, the rear terminals of these bars being rounded as at 183' to cause the catalogue to pass easily from the table of the presser. These spaced table bars 183 are mounted upon a vertically adjustable frame 184, which has the elongated slot and pin connections 185 with the frame of the machine, so that the adjustable frame 184 with its table may be adjusted when desired through the worm 186 operated by the hand shaft 187, this worm meshing with the gear 188 of the cam shaft 189, the cam 190 of which works in the elongated slot 191 in the frame 184, the operation of the hand shaft 187, through the train of mechanisms just mentioned enabling the table 183 with its frame to be raised and lowered to accommodate catalogues of various thicknesses as will be readily understood.

Thus it will be seen by reference to Figs. 20 to 22 inclusive, that after the end flap s' of the catalogue has had the glue applied thereto and has been folded over against the previously folded side flaps or sections of the sheet, as shown in Fig. 17, and the pusher gripper F has released the catalogue, by the action of the gripper passing off of the end 128' of the cam 128, the catalogue now completely wrapped will pass through the presser device J and the laps or joints firmly sealed so that the package will appear as shown in Fig. 33, presenting a neat appearance, with the catalogue completely wrapped and with one flap tucked in but not secured, so that it may be readily pulled out to remove the catalogue from the envelop.

In case the sheet should not be properly fed from the sheet gripper device to the sheet gripper E or should the latter not properly grasp the sheet in such manner that the sheet will be interposed between the gripper hook and the platform plate of the gripper the machine will be automatically stopped, thereby preventing the dropping or feeding of a catalogue when no sheet is present to receive it. This is accomplished as follows: The power shaft of the machine is provided with the usual clutch 193 normally held in driven engagement with the loose clutch gear member 193' by means of the spring 194. The clutch shaft 195 is pivoted at 196 to the shipping lever 197 which is fulcrumed at its lower end at 198 to a bracket forming part of the frame of the machine. This shipping lever 197 may be manually shifted by grasping the handle 199, to throw the clutch out. It may also be thrown out automatically to stop the ma-

chine through certain electrically controlled mechanism of the general character shown in the patent to Reifsnnyder and Schwerdtle, No. 1,171,804, dated February 15, 1916. In the present instance the shifting lever 197 carries an electric solenoid 200, the plunger 201 of which carries the shipper yoke 202, which engages with the grooved roller 203 sliding on the stud 204 also carried by the shifting clutch lever 197. The coil spring 205 normally tends to hold this roller 203 out of the path of the cam 206 mounted on the continuously rotating shaft 207. As will be seen by reference to Figs. 12 and 23, the platform plate 30 of the gripper E is insulated from the bed of the carriage 27. Connected to the underside of the bed of the machine but insulated therefrom, and located a short distance beyond the point where the gripper E should grasp a sheet is a contact plate 208 in circuit with the battery 209 and consequently with the solenoid 200, as diagrammatically illustrated in Fig. 26. Now should the gripper hooks fail to grasp a sheet, the contact strip 210 on the carriage will contact with the contact plate 208, and the circuit will be closed to the solenoid, through the gripper hook, the contact strip 210, the contact plate 208, and the circuit wires, thereby energizing the solenoid, pulling inward on the plunger and bringing the sliding roller 203 in the path of the cam 206, the cam thus pushing on the roller and consequently throwing the lever 197 to disconnect the power clutch.

Should a catalogue fail to feed, the lever will likewise be thrown out by the solenoid through the mechanism diagrammatically illustrated in Fig. 26. To the back of the supporting bars 104 which form the bracket grid for holding the catalogue just before it is deposited on the sheet we fasten and insulate a pair of contact brushes 211 between which is located the partly insulated rotating armature 212. Now at certain times in the rotation of the armature, as when the insulated section thereof spans the brushes 211, no current can pass there-through from the battery 209, while at other times the circuit is closed at this point. When a catalogue drops onto the supporting ends 103 of the bracket 104, it will depress the adjacent end 213 of the rocking arm 214 and lift the end 215 of the latter out of contact with the arm 211' of the brush 211, so that even if the circuit is complete or closed by the rotating armature at that point, the circuit to the ground or frame of the machine will be broken and the solenoid will not be energized. However, should the catalogue not be fed the end 215 of the arm 214 will rest upon the brush arm 211' and when the rotating armature closes the circuit between the brushes 211 the solenoid will be energized, the clutch lever 197

shifted as before described and the machine stopped.

If necessary, the solenoid may also be energized by the operation of suitable push buttons 216 located at convenient points on the machine and in circuit with the solenoid, so that when desired, or necessary, the operator may stop the machine.

While we have herein shown and described one particular embodiment of our invention, we wish it to be understood that we do not confine ourselves to all the precise details of construction herein set forth by way of illustration, as modification and variation may be made without departing from the spirit of the invention or exceeding the scope of the appended claims.

What we claim is:

1. In a machine of the class described, the combination of means for advancing a wrapper sheet, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be wrapped upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into overlapping relation with each other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the previously folded side portions.

2. In a machine of the class described, the combination of means for advancing a wrapper sheet, mechanism for applying an adhesive along a face of one side edge portion of the wrapper sheet, mechanism for depositing an article to be wrapped upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet about the side edges of the article and into overlapping relation with each other and in position to overlie the previously folded end portion, said side portions being adhesively connected by the adhesive previously applied to the aforesaid side edge portion, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the previously folded and adhesively connected side portions, the construction being such that the article is completely enveloped in the wrapper sheet with one end portion of the wrap-

per tucked in and forming a removable flap to permit access to the envelop to remove the article.

3. In a machine of the class described, the
 5 combination with a traveling carrier, means mounted on the carrier for engaging and advancing a wrapper sheet, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be wrapped
 10 upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold
 15 opposite side portions of the sheet into overlapping relation with each other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying
 20 an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the previously
 25 folded side portions.

4. In a machine of the class described, the combination of a traveling carrier, embodying devices mounted on the carrier and
 30 adapted to grip one end of a sheet and advance the same during the travel of the carrier, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be wrapped upon the sheet, means
 35 acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into overlapping relation with each
 40 other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the
 45 previously folded side portions.

5. In a machine of the class described, the combination of an endless conveyer, automatic sheet gripping devices mounted thereon, said sheet gripping devices together with
 55 the conveyer constituting means for advancing a wrapper sheet, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be wrapped
 60 upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into overlapping relation with each other and with

the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the
 70 sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the previously folded side portions.

6. In a machine of the class described, the combination with a frame, of an endless chain conveyer mounted on the frame, sheet gripping devices carried in spaced relation by the chain conveyer and adapted to grip
 80 a wrapper sheet and to advance the same during the travel of the conveyer, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be
 85 wrapped upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into
 90 overlapping relation with each other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the
 100 previously folded side portions.

7. In a machine of the class described, the combination of a traveling conveyer, sheet gripping devices mounted in spaced relation on said conveyer and adapted in the
 105 travel of the latter to successively grip and advance individual wrapper sheets, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be
 110 wrapped upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet
 115 into overlapping relation with each other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the
 125 previously folded side portions.

8. In a machine of the class described, the combination with sheet selecting and feeding mechanism adapted to successively feed individual wrapper sheets, of means for ad-
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vancing a wrapper sheet, mechanism for applying an adhesive along a face of one side portion of the wrapper sheet, mechanism for depositing an article to be wrapped upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into overlapping relation with each other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the previously folded side portions.

9. In a machine of the class described, the combination of means for advancing a wrapper sheet, of mechanism located in the path of travel of the sheet for applying an adhesive along a face portion of the sheet, automatic mechanism for depositing an article to be wrapped on the sheet, automatic means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into overlapping relation with each other and with the previously folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent portion of the article and upon the previously folded side portions whereby said article will be completely contained in an envelop.

10. In a machine of the class described, the combination with sheet selecting and feeding devices for successively selecting and feeding individual sheets to the sheet gripping devices adapted to grip one end of the sheet and to advance the same, article feeding devices adapted to automatically deposit an article upon a sheet brought beneath such devices by the sheet gripping devices, pusher gripping devices for folding over one end of the sheet upon the article, folder mechanism for folding over the side portions of the sheet upon the article, mechanism for folding over the terminating end portion of the sheet upon the article.

11. In a machine of the class described, the combination of means for advancing a wrapper sheet, of mechanism for applying an adhesive longitudinally of a face portion of the wrapper sheet, mechanism for

depositing an article to be wrapped upon the sheet, means acting to engage one end of the wrapper sheet to fold such end over one end portion of the article on the sheet, folder mechanism operating to fold opposite side portions of the sheet into overlapping relation with each other and with the folded end portion, whereby said side portions will be adhesively connected by the adhesive previously applied to one side portion as aforesaid, mechanism for applying an adhesive to the end portion of the sheet opposite to the first mentioned folded end portion, and means for folding the adhesive end portion of the sheet over the adjacent end of the article and upon the previously folded side portions, and presser devices located beyond the last mentioned end folding means for pressing upon the folded wrapper to seal the latter at its adhesively connected portions.

12. In a machine of the class described, the combination of means for advancing a wrapper sheet, means for depositing an article to be wrapped upon the sheet, means for folding one end of the wrapper sheet about one end of the article, mechanism adapted to engage the article and push the latter into close engagement with the end fold of the wrapper sheet, means for folding over the side portions of a sheet about the article, and means for folding over the remaining end portion of the sheet to complete an envelop for the article.

13. In a machine of the class described, the combination with a traveling sheet advancing means, mechanism for depositing an article upon the sheet, mechanism for folding over a portion of the sheet upon an adjacent portion of the article to form a loose flap, a pusher device for pushing the article bodily on the wrapper in a direction opposite to its direction of travel to force said article snugly into the fold of the wrapper sheet, and means for folding over the remaining portions of the wrapper to form a complete envelop for the article.

14. In a machine of the class described, the combination with a traveling carrier including a sheet gripping device and a flap folding and article pushing device, means for depositing an article upon a sheet located between said devices, and means for completely folding the sheet about the article to form a complete envelop therefor.

15. In a machine of the class described, the combination with a sheet advancing mechanism, of adhesive-applying mechanism for applying an adhesive to one face portion of the sheet, mechanism located above the path of travel of the sheet for depositing the article to be wrapped upon the sheet, a device for folding over an end portion of the sheet to constitute a free

flap, folder mechanism for folding over opposite side portions of the sheet, means for applying an adhesive to the remaining end portion of the sheet, means for folding over such end portion of the sheet to complete an envelop having a tucked-in end flap, and a presser device adapted to bear upon the enveloped article to press and seal the envelop.

10 16. In a machine of the class described, a carrier including a conveyer and a pusher gripper carried thereby comprising a carriage, and a member mounted on said carriage and adapted to engage a sheet and a portion of an article resting upon said sheet, and means located in the path of travel of said pusher gripper for operating the latter to cause the same to fold over a portion of the sheet on the article and to bear against and push the article with the sheet forward with the travel of the conveyer.

15 17. In a machine of the class described, the combination with an endless traveling conveyer, of a sheet gripping device including a carriage connected with the conveyer and a movable sheet gripping member mounted on the carriage, of a pusher gripping device spaced apart from the sheet gripping device and comprising a carriage connected with the conveyer, and a movable sheet folding and article engaging member mounted on the carriage, and cam members mounted in the path of travel of the conveyer for actuating both of the said gripping devices.

20 18. In a machine of the class described, mechanism for depositing an article upon the sheet, comprising a magazine for containing a stack of the articles, roller devices for feeding the articles one at a time from the magazine, a supporting bracket located beneath the roller devices and adapted to temporarily support the articles and mechanism adapted to push the articles from the bracket onto the wrapper sheet positioned to receive the same.

25 19. In a machine of the class described, mechanism for depositing an article upon a wrapper sheet, comprising a magazine for holding the articles in a vertical or up-ended position, a support located below the magazine, means interposed between the magazine and the support for delivering the articles in an upright position, and means operable at predetermined times for pushing the article from the support and permitting the latter to fall to an approximately horizontal position upon a wrapper sheet beneath the support.

30 20. In a machine of the class described, the combination with means for advancing a sheet, means located above the path of travel of the sheet for depositing an article upon the sheet, said means including a mag-

azine for holding the articles in stacked 65 relation, devices for feeding the articles along the magazine, intermittently operated mechanism for feeding the articles one at a time from the magazine, an article support located below the feeding devices for receiving the articles one at a time, means operable at predetermined times for contacting with the article to push the same from the support and to cause said article to drop by gravity upon the sheet, and devices for folding the wrapper sheet about the article. 70 75

21. In a machine of the class described, the combination with means for folding one end of a wrapper sheet about an adjacent portion of an article, means for carrying the wrapper blank and the article along a predetermined path of travel and a pusher device adapted to engage with a portion of the article opposite that portion above which the end of the blank is folded, to push said article backward and into close contact with the fold of the wrapper sheet. 80 85

22. In a machine of the class described, the combination of a traveling conveyer adapted to advance a wrapper sheet, an article-holding magazine mounted above the conveyer, means for automatically removing an article from the magazine and depositing the same upon a wrapper sheet carried by the conveyer, devices for folding one end and two sides of the wrapper sheet about the article deposited therein, said end being free and tucked in beneath the two folded sides of the wrapper sheet, means for applying an adhesive to the edge portion of the other end of the wrapper sheet, means for folding over said adhesive end of the wrapper sheet against the oppositely folded side portions of the sheet, and a presser device for subsequently receiving and pressing the wrapped package. 90 95 100 105

23. In a machine of the class described, means for advancing a wrapper sheet, comprising a pair of endless chains, and sheet gripping devices carried by said chains, of means for folding one end of the sheet about an article and pushing said article along a predetermined path, said means including a second pair of endless chains, and sheet folding and article engaging means mounted thereon in alternate relation with the sheet gripping devices on the first mentioned pair of chains. 110 115

24. In a machine of the class described, the combination with sheet selecting mechanism, sheet advancing mechanism adapted to receive a sheet from the sheet selecting mechanism and feed such sheet along a predetermined path, mechanism for depositing an article upon a sheet brought therebeneath by the sheet advancing mechanism, power transmission mechanism for driving the sheet selecting mechanism, the sheet advanc- 120 125

ing mechanism and the article depositing
mechanism, an electrically controlled mech-
anism operable upon the power transmission
mechanism for automatically throwing the
5 sheet selecting mechanism, the sheet advanc-
ing mechanism and the article depositing
mechanism out of operation at predeter-
mined times.

In testimony whereof we affix our signa-
tures in the presence of two witnesses.

JAMES D. REIFSNYDER.
WILLIAM A. WEIGHTMAN.

Witnesses:

CARL E. SCHAEFFER,
SILAS E. CHILD.